DTRA HISTORY SERIES

CREATING THE DEFENSE THREAT REDUCTION AGENCY

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by Joseph P. Harahan, Ph.D.
Captain Robert J. Bennett

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Director's Foreword

The creation of a new defense agency is invariably tied to the senior leader's desire to refocus the department's people, resources, and organizations towards a new mission. In the late-1990s, the secretary of defense stated that terrorists, especially those who would use weapons of mass destruction against U.S. citizens and military forces, were a significant new threat to the United States of America. The proliferation of weapons around the world added fuel to the threat. The use of biological and chemical weapons by terrorist factions compounded the problem. As a direct consequence, the secretary commissioned a series of analytical studies that led senior mangers to establish in the Office of the Secretary of Defense a new, focused defense agency – the Defense Threat Reduction Agency.

This historical report explains the context, assumptions, and rationale for establishing the new agency. In addition, it narrates the history of DTRA's first three years, from 1998 to 2001. Those were seminal years, as the agency's initial cadre of leaders worked to consolidate all of the people, programs, and existing missions into a single organization, with specific programs and weapons that would assist the Department of Defense, the military commands, and the nation in responding to the WMD terrorist threat.

In the American constitutional system, federal agencies involved in significant, contemporary missions have a special obligation to inform the public of their activities. The government is accountable to the people. This history helps meet that obligation by explaining the events and decisions that led to "Creating the Defense Threat Reduction Agency."

STEPHEN M. YOUNGER
DIRECTOR

Authors

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Introduction

Strategy precedes structure. Major changes in strategy, especially ones leading to shifts in institutional focus, funds, and resources, often lead to the creation of new organizations. This was the case as Secretary of Defense William S. Cohen presided over the establishment of the Defense Threat Reduction Agency on October 1, 1998. The new agency's origins lay in three national security issues that came to the forefront in the mid-1990s. Each had strategic implications, and each was discussed at senior levels in the Department of Defense, Joint Chiefs of Staff, National Security Council, and Congress.

The first issue was terrorism. By 1995, it had become the major new threat facing the nation, its people, and military forces. Within the Department of Defense (DoD), senior civilian and military policy officials were studying, briefing, coordinating, and recommending strategies and programs for responding to the new terrorist threats. There were many fundamental questions. What was the greatest threat - an attack on the United States homeland or its military forces abroad using nuclear, chemical, biological, or conventional explosive weapons? Did the department have a strategy and programs for responding to each type of attack? Would the counter-terrorism mission be assigned to one of the military services? Would it be given to a specified combatant command? What about homeland defense? What command or agency would be assigned responsibility for training, equipping, and deploying DoD's resources to support Justice Department and Federal Bureau of Investigation (FBI) officials responding to major terrorist incidents in the United States? Or would it be best if the Defense Department's responsibilities were shared with the military commands and a new agency with a specific threat reduction mission in the Office of the Secretary of Defense? From 1995 to 1998, these and other questions were actively analyzed, discussed, and decided by the secretary of defense and his senior civilian and military advisors.

The second issue, also occurring in the mid-1990s, was a major critique of the DoD's capability to sustain the nation's existing nuclear deterrent forces in the coming decades. This critique urged the department's senior leaders to revitalize

its institutional focus on the policies, people, and programs needed to keep the strategic nuclear forces strong and credible. The third issue was the perception that the department's growing nonproliferation and counterproliferation missions had to be strengthened. Senior leaders in the Department of Defense examined ways to consolidate existing agencies, organizations, programs, and administrations that dealt with the nonproliferation of weapons of mass destruction. Consolidation, they believed, would lead to a more focused management of the department's nonproliferation and counterproliferation policies and programs.

Initially unrelated, these issues became intertwined as the secretary of defense and his senior advisors acted in 1997 and 1998 to change defense strategy, policy, and organizations. They began with the Defense Reform Initiative (DRI), announced publicly in November 1997. Then nearly a year later, on October 1, 1998, the secretary of defense established the Defense Threat Reduction Agency.

Responding to Terrorism

Terrorism became a national security issue in the early 1990s following a series of attacks resulting in destruction, deaths, and mass casualties. The initial domestic terrorist incident occurred in New York City on February 26, 1993, when terrorists drove a rental truck, laden with explosives, into the World Trade Center complex. Remotely, they triggered a massive explosion that blew apart an underground parking garage, killing six people, injuring more than 1,000, and causing 50,000 people to be evacuated from the trade center complex and surrounding buildings.[1] Seven months later, in October 1993, American Special Forces on a peacekeeping mission in Mogadishu, Somalia were caught in a murderous crossfire with local armed guerillas. Eighteen U.S. soldiers died; seventy-five were wounded.[2] While not a classic case of terrorism, this dramatic incident demonstrated the military need for force protection and for better local intelligence of terrorist factions. Three years later, in April 1996, terrorists detonated a truck laden with 20,000 pounds of TNT near a fence in the American military section of Dhahran Air Base, Saudi Arabia. The explosion killed 19 U.S. Air Force members and wounded hundreds of service men and Saudi Arabian citizens. Known as the Khobar Towers bombing, this terrorist incident triggered a major investigation which changed the way that the Joint Chiefs of Staff, the commanders-in-chief of the combatant commands, and the military services viewed force protection.[3] Terrorism was real threat, both to American citizens at home and to U.S. military forces abroad. During the mid-1990s, violent terrorist acts continued. Individual terrorists, religious sects, and political cells carried out conventional, chemical, and biological weapons attacks and threats in Oklahoma City (1995), Tokyo (1995), Saudi Arabia (1996), Washington, D.C. (1997), Nairobi, Kenya (1998), and Dar-Es-Salaam, Tanzania (1998).[4]

NOTE: Cited material is referenced in endnotes, see page 88.

The Oklahoma City bombing shocked the nation. On April 19, 1995, a single American citizen exploded a parked, rental truck filled with a fertilizer-chemical-explosive compound, blowing up the Oklahoma City federal office building and killing 168 people.[5] It was the worst terrorist act ever committed in the United States and it revealed the American public's vulnerability. Within weeks, the president requested that Congress fund 1,000 new federal officials to investigate, deter, and prosecute terrorist activity. A new Domestic Counterterrorism Center was established, headed by the FBI. A presidential directive assigned the Justice Department and the FBI specific responsibility for developing and implementing the administration's domestic antiterrorism effort.[6] Richard A. Clarke, a senior National Security Council (NSC) official, was given new powers as the chairman of the NSC Interagency Counterterrorism Committee. In 1996 Congress acted, authorizing the expansion of the FBI, funding the new counterterrorism center, and enacting the Nunn-Lugar-Domenici Amendment to the Defense Against Weapons of Mass Destruction (WMD) Act. This amendment established the Department of Defense as the lead federal agency in the Emergency Response Assistance program and provided $100 million annually for training courses, new equipment, and exercises to improve the federal, state, and local governments' ability to respond to WMD incidents in the civilian population.[7]

Another terrorist attack, the release of the chemical nerve gas sarin in Tokyo in March 1995, profoundly influenced U.S. Senator William S. Cohen. In 1997, Senator Cohen became secretary of defense. In the Tokyo attack, followers of a religious sect, Aum Shinrikyo, released six canisters of sarin gas into three subway trains, killing twelve and injuring over 5,000 people. Thousands of people jammed the city's emergency medical system. The culprits were caught and when the police raided the sect's compound they seized two tons of chemicals used to make sarin.[8] The potential for mass casualties was apparent. This Tokyo subway incident demonstrated the far-reaching consequences of urban terrorism. In the United States, defense analysts became concerned about a terrorist attack using chemical weapons on an American city or military institution. When Senator Cohen was sworn in as secretary of defense in January 1997, he made international terrorism a priority. In public speeches, Congressional testimony, NSC meetings with the president, and in senior departmental meetings, Cohen repeatedly raised the issue of terrorists using nuclear, chemical, biological, or high-explosive weapons in a sudden attack on U.S. forces or the American people.

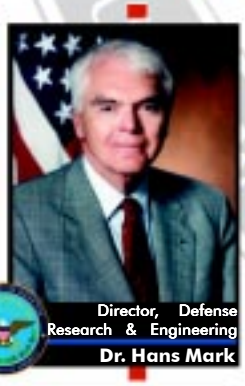
"As the new millennium approaches," Cohen wrote to Congress, "the United States faces a heightened prospect that regional aggressors, third-rate armies, terrorist cells, and even religious cults will wield disproportionate power by using—or even threatening to use—nuclear, biological, or chemical weapons against our troops in the field and our people at home."[9] During the three years that he

served as secretary of defense (1997 to 2000), Cohen pushed senior defense officials and the commanders of the military services to think more seriously about international terrorists using weapons of mass destruction. Specifically, he told them to rethink their intelligence, planning, training, organizations, resources, and their mix of scientists, technologists, and military officers working through this complex issue. It became, over time, one of Cohen's most significant policy initiatives and, in retrospect, it was a major impetus leading to the creation of DTRA.

Four days after Cohen took office on January 24, 1997, his principal deputy, Dr. Paul G. Kaminski, authorized a new Defense Science Board (DSB) task force to define the new transnational terrorist threats. The task force would assess the nation's vulnerabilities, examine the department's capabilities to respond, identify available and potential technologies for protecting U.S. armed forces, and recommend specific actions.[10] Dr. Robert J. Hermann served as chairman, with General Larry D. Welch, USAF (Retired), serving as vice-chairman. More than 225 defense experts, organized into five panels, concentrated on defining the capabilities of international terrorist organizations, international crime syndicates, transnational religious sects, and radical political groups that might use nuclear, chemical, or biological weapons against U.S. military or civilian populations. The final report, known as the "DSB Summer Study of 1997 on DoD Responses to Transnational Threats," became a seminal document in the Defense Department for defining the new threats and recommending a range of responses. General Welch was a key figure in this study. In his opinion, it led senior defense officials to consider establishing a new defense agency. "The Defense Science Board's report on transnational threats simply reinforced a subject (WMD terrorism) that was obviously already on his mind," Welch said of the secretary of defense.[11]

Influenced by recent terrorist incidents, this Defense Science Board study, and other departmental reviews, Cohen asked Dr. John J. Hamre, his new deputy secretary of defense to examine over the summer of 1997 all DoD support agencies and organizations that were dealing with threats from weapons of mass destruction, nonproliferation, and counterproliferation.[12] According to Hamre, Cohen's request was based on threat analyses drawn from real-world intelligence and the probability of a catastrophic terrorist incident in the United States or against American forces abroad. "[It was] deeply on his mind, deeply on his mind… . During that first year, he was becoming more aware of the problems caused by chemical, biological, and nuclear terrorism."[13] By the summer of 1997, Hamre said that they believed "that the biggest threat we were going to face in this decade was the proliferation of materials that constitute weapons of mass destruction—and that the agenda for nonproliferation and counterproliferation was not well focused in terms an institutional center of gravity (within DoD)."[14]

DTRA Founding Leadership



Major changes in the Department of Defense's strategy for responding to terrorism led Secretary of Defense William S. Cohen to establish the Defense Threat Reduction Agency, on October 1, 1998. Dr. John J. Hamre and Dr. Jacques S. Gansler were responsible for crafting the new organization. Dr. Jay C. Davis served as DTRA's first director, with Major General William F. Moore, USAF, as deputy director.

Further, Hamre thought that the DSB study, in particular, had demonstrated that the department lacked an intellectual underpinning to understand, evaluate, and recommend a course of action against a biological or chemical terrorist attack.

This was an important point. The military services had shown little interest in tackling these new threats. The unified commands had their specific missions and regional responsibilities. But the new threats included proliferation of nuclear weapons and materials, the possibility of biological or chemical attacks, and even attacks on the information systems of the U.S. military commands. According to both Hamre and Welch, these new threats fell into the "too hard" to solve category for the U.S. military commands and existing DoD agencies.[15] There were no easy answers. Hamre, in particular, believed that the department lacked the "intellectual depth" of knowledge to deal seriously with biological terrorism. Welch and his colleagues in the DSB Transnational Threat study had concluded that the department needed a better biological and chemical scientific base, new technologies and countermeasures, new intelligence detection capabilities, new penetrating weapons, better coordination across federal departments and agencies, and significantly, new international cooperative threat reduction programs.[16] Given this substantive critique, Hamre asked the question: Who in the department was going to take on these "too hard" problems?

Sustaining the Nation's Nuclear Deterrent Forces

Another "hard" problem was how to reform and revitalize the Department of Defense and the Department of Energy's institutional focus on sustaining the nation's nuclear forces. By the mid-1990s, there was a perception among defense experts that the programs and infrastructure needed to sustain the nation's strategic nuclear forces and weapons were in decline. A combination of elements supported this conclusion: mandatory strategic force reductions under the Strategic Arms Reduction Treaties (START I and II), cancellation in the early 1990s of many strategic modernization programs, and the disestablishment of the Strategic Air Command (SAC), which had been a powerful advocate for all of the strategic nuclear programs. In 1993 the Congress directed the president and secretary of defense to conduct a major review of the nation's nuclear deterrence forces, weapons, and programs.

Known as the Nuclear Posture Review of 1994, it defined U.S. policy for nuclear deterrence, arms control, and nonproliferation.[17] Approved by the president as policy in September 1994, the review reconfirmed the nation's commitment to implementing the START I and II treaties. It defined the size of

strategic forces, specifying the mix of land-based intercontinental ballistic missiles, long-range bombers, and submarine-launched ballistic missiles. It directed the Department of Energy to pursue a stockpile stewardship and management program; and it recommended to Congress a series of new strategic force modernization programs.[18]

From 1996 to 1998, General Welch led a Defense Science Board Study on Sustaining the Nuclear Deterrent. Formerly, Welch had served as the Chief of Staff of the Air Force, and then as president of the influential Institute for Defense Analysis, a federally funded research and development center. The new DSB Study examined many of the issues taken up in the earlier Nuclear Posture Review. According to Welch, there had been little progress in revitalizing institutional support within DoD for maintaining a vigorous nuclear deterrent force. He said that the study "disabused many people of the idea that this deterrent [force] was going to survive in a healthy manner for a long period of time without senior defense attention."[19] Among several substantial influences, "this [study] was one of the contributions to engaging the deputy secretary of defense, Dr. Hamre, on the issue," Welch remembered.[20] Hamre confirmed that judgment in an interview in February 2001. He said that fixing the nuclear sustainment program through a departmental reorganization was one of the major reasons for creating a new senior-level agency—the Defense Threat Reduction Agency.

General Larry D. Welch, USAF (Retired), Chairman, Threat Reduction Advisory Committee

"We were dealing," Hamre recalled, "with a basic collapse of institutional interest in nuclear weapons."[21] "When the Cold War ended," he continued, "and the department disbanded SAC, for all practical purposes the intellectual underpinnings for nuclear weapons started to disappear. The Defense Nuclear Agency, which was the repository of [nuclear] skills inside the department, was still there, but it was more as a vestige."[22] The military services had stopped sending their best people to the nuclear agency. "It was seen as sunset mission," Hamre observed, "not as a sunrise mission."[23] By 1997, senior defense leaders had concluded that the nuclear deterrent force and supporting organizations not only needed restructuring, but also redirection in order to respond to new WMD threats facing the nation.

Strengthening the Department's Emerging Nonproliferation and Counterproliferation Missions

The third national security issue began with an assumption that it was in the United States' interest to control or limit the proliferation of weapons of mass destruction throughout the world. A second assumption held that, if states or terrorist groups succeeded in developing or acquiring weapons of mass destruction, then the United States needed counterproliferation weapons and countermeasures in order to act decisively. According to Deputy Secretary of Defense Hamre, the department was already implementing a number of major nonproliferation measures - international arms control treaties and agreements with more than 150 nations, significant cooperative threat reduction programs with Russia, Ukraine, Belarus, and Kazakhstan, and a technology security review process that monitored export licensing of critical exports. The people and organizations carrying out these nonproliferation measures, he believed, would fit into a new OSD-level threat reduction agency. Regarding the department's efforts in developing WMD countermeasures, Hamre thought that the current programs needed to be refocused to concentrate on the threat from terrorism.[24]

By September 1997 the main ingredients for the defense reorganization that led to the creation of the Defense Threat Reduction Agency were in place. "Fundamentally," Hamre recalled, "it was a recognition that nonproliferation/counterproliferation is the agenda for this decade. That we did not have an intellectual underpinning for [understanding] biological or chemical weapons. That the nuclear mission had collapsed, or was collapsing, and that we needed to basically get a new institutional focus. That is what drove it [DTRA's establishment]."[25] Hamre's closest associate in crafting the new agency was Dr. Jacques S. Gansler. A senior defense management and acquisition specialist, Gansler had served on many Defense Science Board studies, and in the summer of 1997, he had been nominated to be the Under Secretary of Defense for Acquisition, Technology and Logistics. Together, these two senior defense leaders assembled the pieces of the new agency.

After studying the issue and discussing it at length with Hamre, Gansler said that they wanted the new agency to implement all of the department's programs for the nonproliferation and counterproliferation of weapons of mass destruction. "There are two sides," he explained, "to the story of how you control weapons of mass destruction. First, you try to cut back on proliferation. Then, you try to emphasize the defensive techniques that could be used."[26] This two-sided concept became, in every iteration of the reorganization, the core organizing principle: to

establish an institutional center in the Department of Defense responsible for the WMD nonproliferation/counterproliferation mission. Hamre was even more emphatic, declaring that Cohen believed the new agency (DTRA) would become "one of the things he was known for—creating a new institutional focus for the mission of this new century."[27]

The next set of questions concerned which specific organizations within the department would make up the new agency. By late summer 1997, Hamre and Gansler had identified three existing defense agencies that fit into the broader WMD nonproliferation/ counterproliferation mission area. As Hamre explained, each of these organizations was already "dealing with this new emerging [post-Cold War] world."[28] First, there was the Defense Special Weapons Agency (DSWA), formerly the Defense Nuclear Agency. While acknowledging that it had "tremendous technical skills," Hamre thought that DSWA was "locked mentally" into the Cold War and needed to change its outlook. Next was the On-Site Inspection Agency (OSIA), which was responsible for conducting the on-site inspection and escort provisions of nine arms control treaties and agreements. He thought that OSIA had "by far the most creative and vibrant bureaucratic culture," but it lacked "technical expertise." Finally, there was the Defense Technology Security Administration (DTSA), an organization responsible for the department's review of export licenses. Hamre believed that this organization lacked both technical expertise and a strategic vision. Specifically, he wanted to refocus the entire export control effort around the "real security issues," rather than the current "thankless" role of looking through "all kinds" of licenses.[29]

DTRA conducts escort training in preparation for inspections under chemical weapons agreements, such as the Chemical Weapons Convention.

Hamre also thought that the department needed to develop a "stronger program" for counterproliferation. To these existing organizations, the two senior DoD leaders added the department's Cooperative Threat Reduction (CTR) program office, which was then carrying out the major U.S. nonproliferation effort with new nations of the former Soviet Union. "We need all these activities," Hamre concluded, "but they were stuck off in some suboptimal ways by themselves, and they weren't growing. Our goal was, frankly, to get them to have a clearer vision of the future, which is counterproliferation in general—to counter all forms of weapons of mass destruction."[30]

In a recent interview, Gansler set these organizational changes into context: "This happened at a time when we were considering a major reorganization and

major initiatives during the second administration. Secretary Cohen was going to come out with his Defense Reform Initiative—the DRI…. It seemed like an ideal time to create this new organization."[31] The DRI was a major reform effort by the secretary of defense to change the department's business practices and to reduce the managerial overhead within the Office of the Secretary of Defense and fifteen separate defense agencies. The reform initiative had real substance and it developed into a major effort, especially in the areas of defense acquisition, program management, and defense business practices.[32]

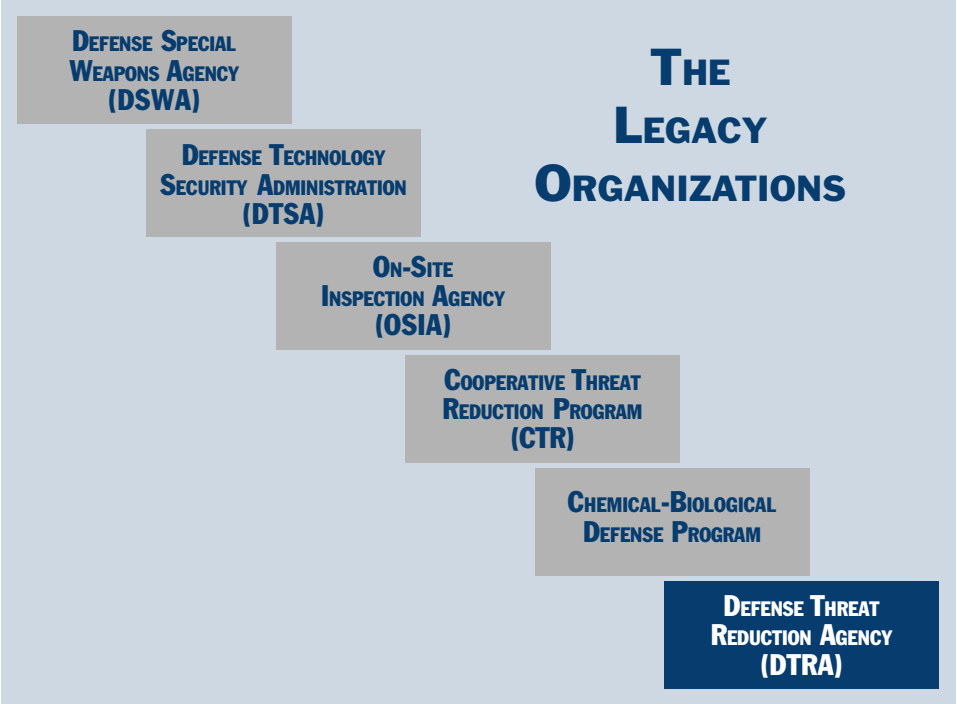
When Cohen publicly announced the DRI on November 7, 1997, Vice President Albert Gore, Jr. attended the ceremony and participated in a press conference. The vice president linked DoD's Defense Reform Initiative to the Clinton administration's Reengineering Government effort. He also spoke about the importance of implementing "best business practices" throughout the Defense Department.[33] Following the vice president's remarks, the secretary explained the initiative's four basic pillars: reengineering, consolidating, competing, and eliminating. In the area of consolidation, Cohen said that combining selected defense agencies could lead to a 21 percent reduction in personnel, and that by incorporating selected DoD program offices and smaller organizations into the newly consolidated agencies, they could reduce their personnel by 36 percent. Then Cohen announced that he had directed the combination of three existing defense organizations and the specialized cooperative threat reduction program office into a single new agency—the Threat Reduction and Treaty Compliance Agency.[34]

New Agency's Core Elements

Three organizations, the Defense Special Weapons Agency, the On-Site Inspection Agency, and the Defense Technology Security Administration, along with the Cooperative Threat Reduction program office in the Office of the Secretary of Defense, formed the core elements of the new agency. Each of these major components had a specific mission focus and cadre of experienced personnel.

The Defense Special Weapons Agency, formerly the Defense Nuclear Agency, had existed for almost fifty years as DoD's center for nuclear and advanced weapons effects expertise. It tested, analyzed, and provided assistance in developing new technologies for modernizing the nation's strategic weapon systems. The agency worked closely with the nation's unified and specified military commands, and in recent years developed monitoring technologies for arms control treaties and agreements. It had been assigned managerial responsibility throughout the

Department of Defense, in coordination with the Department of Energy, for assuring the safety and accountability of the U.S. nuclear weapons stockpile. The agency had created an innovative, multi-layered program for countering the effects of a chemical weapons attack on U.S. military bases and forces. In addition, DSWA had provided skilled contracting officers and staff to carry out the CTR program, in which the United States assisted the nations of the former Soviet Union in reducing their nuclear, chemical, and biological weapons.[35]



The On-Site Inspection Agency had been established in the Department of Defense in January 1988 to carry out the on-site inspection and escorting responsibilities of the U.S. government under the Intermediate-Range Nuclear Forces (INF) Treaty. In the next three years, the agency would help destroy nearly 2,700 nuclear weapon systems under that treaty. In May 1990, President George H. W. Bush directed an expansion of the agency's mission to include preparing for and implementing five new arms control treaties: the Conventional Armed Forces in Europe (CFE) Treaty, Strategic Arms Reduction Treaty (START), Threshold Test Ban Treaty (TTBT), Peaceful Nuclear Explosions Treaty (PNET), and the Chemical Weapons Convention (CWC). Subsequently, OSIA was designated in 1991 as the DoD Executive Agent for the United Nations Special Commission (UNSCOM), which was charged with monitoring the destruction of weapons of mass destruction in Iraq. In 1992, the agency was assigned responsibility, along with the U.S. Air Force, for preparing and training to implement the Open Skies Treaty. The following year, it received mission

responsibility for the Strategic Arms Reduction Treaty II (START II). In its ten-year existence, the On-Site Inspection Agency had been assigned mission responsibility for nine major arms control treaties and several significant arms reduction agreements.[36]

The Defense Technology Security Administration had been established in 1985 as a field activity under the Office of the Under Secretary of Defense for Policy. Its mission was to manage the DoD license review process for the export of dual- use technologies and munitions. It represented the Defense Department in implementing the U.S. government's export control policy in coordination with the State and Commerce Departments. In the international arena, defense technology security specialists worked closely with representatives of the Coordinating Committee for Multilateral Export Controls (COCOM), a multinational organization formed in the 1970s to monitor and limit the export of advanced military technologies to communist nations. In the 1990s, the organization gained new missions and responsibilities as it began screening export licenses for sensitive technologies and materials to a broader array of nations. As weapons proliferated, especially in third-world nations, DTSA personnel stepped up their efforts to deny the export of critical technologies that could be used in developing and deploying weapons of mass destruction.[37]

Another element was the Cooperative Threat Reduction program office, which was transferred from the Office of the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs to the new amalgamated agency. The CTR office's mission was to implement, consistent with international arms control treaty requirements and U.S. government acquisition laws and practices, the Nunn-Lugar program to assist the nations of the former Soviet Union in reducing their weapons of mass destruction subject to international arms control treaties.[38]

A few months after the announcement of the Defense Reform Initiative on November 7, 1997, Hamre transferred the Chemical Demilitarization Program from the Office of the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs to the U.S. Army. At the same time, he directed the small OSD program management office for Chemical-Biological Defense programs be placed into the new agency.[39] Combined, the new agency would have nearly 2,000 people, and a projected budget of $1.9 billion.

Planning Year, 1997-1998

A few weeks after the early November announcement of the Defense Reform Initiative, Hamre asked Larry Lynn, director of the Defense Advanced Research Projects Agency, to lead a small team that would define the new agency's mission, organization, budget, and reporting relationships within the department and the federal government.[40] "He took four weeks to give us a blueprint," Hamre recalled.[41] Lynn and his team studied the missions of the core organizations, examined the DRI report, and incorporated directives and memos from Hamre and Gansler. Then they personally briefed their concept for the new agency to senior defense leaders in the National Security Council, Office of the Secretary of Defense, Joint Chiefs of Staff (JCS), Department of Energy, Congressional committee staff, and selected senior retired civilian and military defense experts.[42]

In this process, Lynn and his team explained that the new OSD agency would have three broad mission elements. First, it would directly support maintaining the U.S. nuclear deterrent by providing: a) OSD/JCS expertise in nuclear weapons and effects; b) independent assessments of nuclear weapons safety, security, reliability and control for the secretary of defense and the chairman of the Joint Chiefs of Staff; c) central management of nuclear weapons stockpile documentation, training, and records for maintenance and control; d) technical support for DoD elements on nuclear matters; and e) participation in the development and support for DoD recommendations to the Energy Department's Stockpile Stewardship Program. Next, the new agency would have the mission of reducing the threat of WMD through arms control treaty monitoring and implementation; implementation of the cooperative threat reduction programs, and carrying out of the department's technology security programs. The third broad mission element would focus the new agency on countering the WMD threat by developing new programs for nuclear, chemical, and biological defenses. According to Lynn, these programs would include: force protection assessments for the chairman of the Joint Chiefs of Staff and the commanders of the specified and unified commands; development of treaty monitoring and verification technologies; development of new weapons to defeat hard and buried targets; and the creation of new countermeasures to support the Special Operations Command in combating terrorism.[43]

Lynn briefed his concept for the new agency to senior national security officials inside and outside of the department. He encountered major objections. Some in the nuclear community objected strongly to the loss of independence of its key OSD agency, the Defense Special Weapons Agency.[44] Congressional staffers objected to the submersion of Congress' major nonproliferation program, the

Cooperative Threat Reduction program, into the new defense agency. Recently retired defense leaders objected to stripping the Office of the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs of its major programs.[45] Lynn briefed Gansler and Hamre. From these and other objections, Hamre recognized that he had made two mistakes.

First, he regretted publicly announcing the new Defense Threat Reduction Agency as part of the Defense Reform Initiative. By linking it to personnel reductions, elimination of organizations, and departmental efficiencies, he said that the message of the new agency got lost. He and the secretary wanted establish a major new agency focused on nonproliferation, counterproliferation, and nuclear deterrence. Even worse, a perception emerged that the three former organizations would be reduced in size in order to achieve efficiencies and personnel reductions. "In essence," Hamre concluded, "we had a management reform parade, and into it we drove a float, called the Defense Threat Reduction Agency, which was really about bringing intellectual vibrancy to the nonproliferation agenda…. [Instead] the whole story got to be about downsizing, shrinking, streamlining, privatizing."[46] It took many months for this perception to dissipate.

Next, Hamre thought that he had erred in abolishing the Office of the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs. While the initial decision fit with Cohen's desire to reduce the number of reporting officials, the objections from Congress were serious. It was a Senate-approved DoD position, and the current occupant, Dr. Harold P. Smith, was a respected nuclear engineer, experienced defense science board analyst, and corporate consultant. Shortly after the new agency's announcement, Smith resigned. When congressional staffers blocked the position's abolition, Hamre decided to leave it vacant.[47] Policy oversight for the new threat reduction agency was assigned to the Director of Defense Research and Engineering (DDR&E). Serving in that key position was Dr. Hans M. Mark, former secretary of the Air Force and a strong supporter of the new agency.

Late January 1998, Lynn presented his concept for DTRA to the Defense Management Council.[48] Dr. Hamre chaired the meeting. Lynn began by recommending that the new agency's name be changed from the Threat Reduction and Treaty Compliance Agency to the Defense Threat Reduction Agency. He then laid out his basic blueprint for the new agency's leadership, chain of command, and institutional relationships within the department. According to Hamre, Lynn told them, "You've done exactly the right thing, but you did it the wrong way."[49] When Lynn briefed the new agency missions, organization, personnel, and budget, the session turned contentious. When the council meeting ended without a consensus, Hamre indicated that he would consider their objections,

but that he was convinced that the department needed a new, focused nonproliferation and counterproliferation agency.

Within a week, Hamre had decided to purse the reorganization by constituting a new panel, the Overarching Integrated Product Team (OIPT), with representatives from each of the merging organizations.[50] Hamre asked George T. Singley, III (the immediate former DDR&E), to lead the new OIPT task force. That task force met as a committee consisting of Major General Gary L. Curtin, USAF, Director, DSWA; Brigadier General John C. Reppert, USA, Director, OSIA; David S. Tarbell, Director, DTSA; Brigadier General Thomas E. Kuenning, Jr., USAF (Retired), Director, CTR Program Office; and Colonel Edwin P. McDermott, USAF, Director, Chemical-Biological Defense Office. This panel used the Lynn briefing as a working blueprint in its deliberations.

Only one month into the new committee's work, Singley resigned from the Department of Defense. Acting quickly, Hamre selected another senior defense leader, Major General Roland Lajoie, USA (Retired), to lead the committee. Lajoie had extensive experience during the 1990s with OSIA, CTR, and DSWA. In organizing and structuring the meetings, briefings, and subpanels, he worked closely with two key staff officers, Colonel Arthur T. Hopkins, USAF, formerly chief of staff at DSWA, and Lieutenant Colonel Michael W. Slifka, USAF, a former executive officer at OSIA. Starting in February 1998, this task force met weekly to review and make recommendations on every aspect of the new agency. In the end, it was this committee and team that shaped, defined, outlined, and developed virtually all of the key elements of the Defense Threat Reduction Agency during the spring and summer months of 1998.[51]

In early March, Hamre testified on the Defense Reform Initiative before the U.S. House of Representative's National Security Subcommittee. He reported on the many facets of the comprehensive initiative, and then mentioned the new agency, DTRA, and the work of Lajoie's new task force.[52] Hamre announced at this committee hearing that he had decided to combine the Cooperative Threat Reduction program offices into a single operation at a single site: the OSIA Headquarters building at Washington Dulles International Airport. At the same time, Hamre announced that he had transferred the Chemical Demilitarization Program from OSD to the U.S. Army. Finally, he told the committee that he had authorized the transfer of the Arms Control Technology Program from the Defense Special Weapons Agency to the On-Site Inspection Agency, in advance of establishing DTRA.

Although Hamre did not announce the name of DTRA's new director at this congressional hearing, an informal, colleague-to-colleague search had been

Dr. Jay C. Davis, first director of DTRA

underway for months. Hamre and Gansler had decided that the top slot would be filled by a senior-level civilian, preferably a scientist or a technically competent senior manager. The deputy would be a senior military officer, one with experience in program management and departmental bureaucracies. In the early spring 1998, they interviewed several people.[53] Then, on May 8, 1998, Hamre announced publicly that he had selected Dr. Jay C. Davis, a senior scientific program manager at the Lawrence Livermore National Laboratory in California, to be the first director of the Defense Threat Reduction Agency. Davis was a nuclear physicist with extensive experience in building and leading multidisciplinary teams of scientists and engineers that developed major analytical programs to solve complex, contemporary technical issues.[54] To complement Davis' skills, Hamre selected a senior military officer to be the new agency's deputy director. Major General William F. Moore, USAF, had been the director of special programs in the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. An aeronautical engineer with a degree from the U.S. Air Force Academy, General Moore was an experienced program manager, with advanced degrees in acquisition management.[55]

The next major development in establishing the Defense Threat Reduction Agency was the creation of a special advisory panel, the Threat Reduction Advisory Committee (TRAC). According to Hamre, Gansler, and Welch, this senior advisory panel was extraordinarily important for the new agency's future. Hamre said it would provide the new agency with an "intellectual grounding."[56] Gansler believed that this senior group (former defense secretaries, service chiefs, senior scientists, and corporate chief executive officers) would give the new agency a "much higher visibility."[57] Welch said that Secretary Cohen wanted a group of people who would help ensure that the new director and agency would concentrate on the "right set" of WMD issues and national problems.[58]

Secretary of Defense Cohen publicly announced the TRAC's establishment on July 15, 1998, the same day that the new advisory committee held its inaugural meeting. Led by General Welch, the advisory committee was a senior-level group of two dozen people, drawn from the nation's top defense experts in the academic, corporate, scientific, intelligence, law enforcement, and diplomatic realms.[59] At the inaugural meeting, Davis briefed the committee on the scope of DTRA's mission, organization, funding, and immediate challenges.[60] He singled out one

new component of the organization, the Advanced Systems and Concepts Office (ASCO). This office, he explained, would conduct end-to-end analysis of the emerging threats, develop advanced concepts, and recommend technologies to meet them. Davis believed that it would become a key element, since it would be performing modeling, simulation, analysis, program, and resource planning. Secretary Cohen attended this initial TRAC meeting, as did Deputy Secretary Hamre and Under Secretary Gansler. Gansler, in his remarks, said: "We are asking this new agency to deal with threat reduction in its broadest sense. We want it to address every conceivable approach to reducing the threat from weapons of mass destruction … to prevent the spread of these weapons, to deter their use. To protect against them if they are used, to identify who is responsible for such use, and to support an appropriate response."[61] Less than eight weeks after this first senior-level meeting, the ceremony establishing the new agency was held at Washington Dulles International Airport on October 1, 1998.

Establishment Day: October 1, 1998

Over the summer months, several questions arose about the place and character of the new agency's official establishment ceremony. General Lajoie and his small cadre of planners began with certain assumptions: it would be a military ceremony; the deputy secretary of defense would preside; the announced director, Dr. Davis, would accept the colors for the new agency; and it would occur on October 1. But where would it be held? Initially, Lajoie recommended to Hamre that DTRA's establishment ceremony be brief, lasting approximately twenty minutes, and to be held at the Pentagon, possibly at the ceremonial river entrance. A small, invited group of dignitaries and agency leaders would participate, with the deputy secretary of defense presiding. When Hamre reviewed the plans in mid-August, he rejected them. Instead, he said that he wanted the new agency and its mission of WMD threat reduction established in a large, public ceremony, with invited guests, media, and international representation. In addition, he wanted an accompanying Pentagon press conference, background news articles, and media attention. Given Hamre's redirection, his senior staff moved to consider other sites.[62]

One obvious site was Washington Dulles International Airport, the designated location of DTRA's new headquarters. However, there were no suitable locations to hold the anticipated 2,500 people and press now expected to attend the ceremony. Earlier in the summer, David J. Rigby, DTRA's Public Affairs chief,

had approached Brigadier General Wilfred O. R. Scheffer, Commander of the German Armed Forces Command for the United States and Canada. Informally, Rigby inquired about using the German military's large warehouse facility at Dulles. After checking with his government in Bonn, Scheffer agreed, pending a formal request. Then in August, following Hamre's redirection, Rigby met with Scheffer again and requested use of the German military warehouse.[63] By the end of August the decision had been made—the ceremony would be held at Dulles Airport in the German Military Representative's facility. The secretary of defense would be the lead speaker. All DTRA military and civilians would be invited. The press would be included, as would representatives of foreign governments, including Germany, Russia and Ukraine.

Secretary of Defense William S. Cohen opening DTRA's establishment ceremony on October 1, 1998.

Secretary of Defense Cohen opened DTRA's establishment ceremony at Dulles International Airport at two o'clock on October 1, 1998. Speaking to nearly 2,000 agency personnel and invited guests, Cohen remarked that: "There is a great irony in this particular moment in history…. the apparent clarity of the Cold War has given away to the complexities that we find in today's headlines…. Today's harsh reality is too powerful to ignore … at least twenty-five countries have, or are in the process of acquiring and developing, nuclear, biological, or chemical weapons and the means to deliver them." Then, he spoke directly to DTRA's military and civilian employees: "Your charge is perhaps the most vital national security mission ever to face our nation. To persevere in reducing the nuclear, chemical, and biological arsenals of the world. To prevent the seepage into the global arms bazaar of those that remain. To protect America from those who would use these terror weapons against us. And to peer into the opaque windows of tomorrow and to avoid the future shock of unknown weapons."[64]

Following his speech, the secretary departed and the official ceremony began. Deputy Secretary of Defense Hamre, the true architect of the new agency, presented the Defense Special Weapons Agency with the Department of Defense Joint Meritorious Unit Award. Dr. George W. Ullrich, Director, DSWA, accepted for the agency. Then, Hamre and Ullrich retired that agency's flag, constituting the unit's disestablishment. Next, Hamre presented the On-Site Inspection Agency with a Joint Meritorious Unit Award. General Reppert, Director, OSIA, accepted; then the two officials retired that agency's flag. Hamre then presented the same meritorious unit award to the Defense Technology Security Administration. David

Tarbell, then the Director of DTSA, accepted. Since this organization was an administration, it did not have agency status. Consequently, Tarbell simply reported to Hamre that the administration was disestablished. At that point, Hamre asked Davis to come forth and, unveiling the new DTRA flag, he presented it to the new agency's director. That simple act, together with the DoD directive, established the Defense Threat Reduction Agency.[65]

Deputy Secretary of Defense John J. Hamre at DTRA's establishment ceremony.

Hamre had insisted on this formal, military aspect of the public ceremony. "[It] was very important to me," he recalled, "to treat with honor and dignity those institutions that we were retiring. We were going to honor those institutions … and we did that. They did wonderful work."[66] He believed it was important to honor and celebrate these organizations for what they had accomplished in their long and distinguished service to the Department of Defense. He also hoped and expected that their commitment would carry over to the new institution. All of these things, he concluded, "just demanded a big deal. And we made it a big deal."[67] Immediately following unfurling of the flag, Dr. Gansler, Under Secretary of Defense for Acquisition, Technology, and Logistics, welcomed the new agency and its employees to the ranks of the 13 other OSD agencies in the Defense Department. Next, Vice Admiral Dennis C. Blair, USN, Director of the Joint Staff of the Joint Chiefs of Staff, spoke about the special relationship of the new agency to the nation's specified and unified commands and military services.

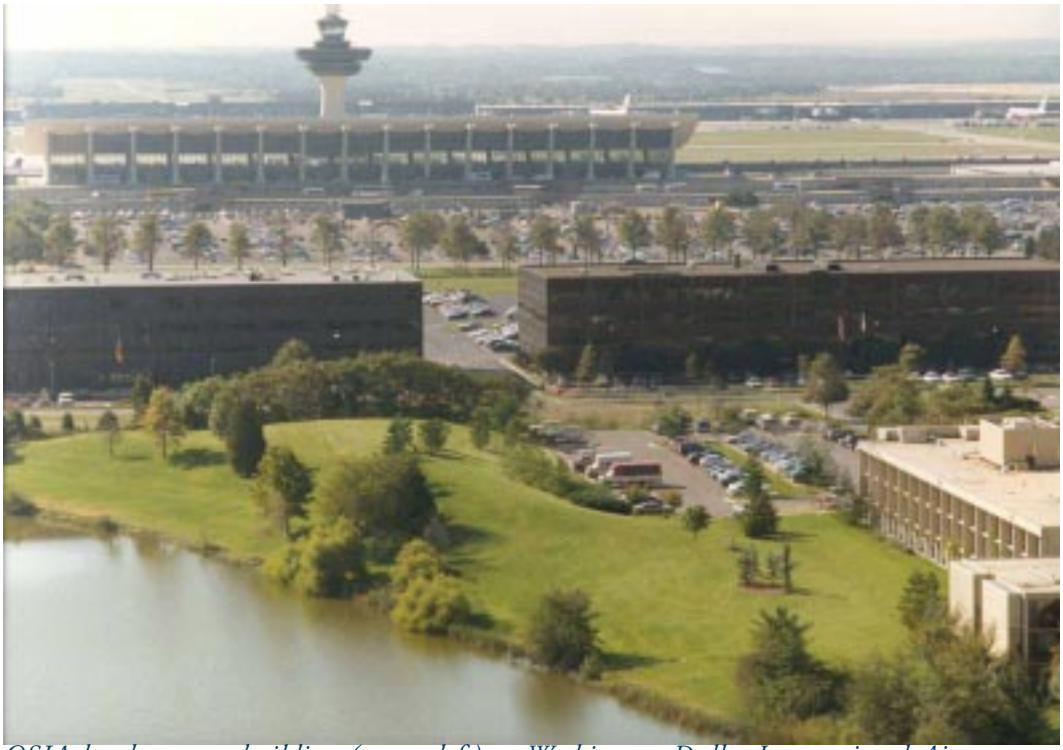
Jay Davis, the final speaker, began his comments with a personal observation: "A year ago I could not have imagined heading an agency such as this; now there is nothing more I would rather do in service to the nation."[68] He then addressed the new agency's people: "The components of DTRA are doing, and have done, their current missions successfully. What is needed in the future is a degree of integration, of internal synergy and outreach across boundaries that was not required in the past."[69] He reiterated the new agency's mission responsibility: to reduce the present threat and to prevent future threats from weapons of mass destruction. Davis then told the assembled military and civilians: "Our missions with respect to the present threats are well defined. To deal with future threats, a future that may be uncomfortably close … we will need to build new relationships to other partners, both inside and outside the Department of Defense…. We must work with the research and intelligence communities to understand both the possible evolution of threats and the intentions of those who would carry them out…. We must work with the intelligence community and the domestic responders … to make sure that speed and anticipation are possible as never

before, indeed to the point of preemption of terrorists, if in fact that is at all possible."[70] He concluded by saying directly: "I accept the charge and responsibility of leading you."

The Official Mission

The Defense Threat Reduction Agency's mission, as stated in the official DoD directive establishing the agency, is to reduce the threat to the United States and its allies from nuclear, biological, chemical (NBC) weapons, other special weapons, and conventional weapons, through the execution of technology security activities, cooperative threat reduction programs, arms control treaty monitoring and on-site inspections, force protection, NBC defenses, and counterproliferation. The agency supports the U.S. nuclear deterrent and provides technical support on matters of weapons of mass destruction to components of the Department of Defense.[71]

DTRA's director reports to the Under Secretary of Defense for Acquisition, Technology and Logistics. On October 1, 1998, the new agency was authorized 2,110 military and civilian personnel. It had a budget of $1.9 billion for fiscal year 1999. Headquarters DTRA was located at the Washington Dulles International Airport. The agency operated offices in Alexandria and Arlington,



OSIA headquarters building (center-left) at Washington Dulles International Airport.

Virginia; Albuquerque, New Mexico; Magna and Tooele, Utah; and San Francisco, California. Overseas locations included agency detachments and offices in Frankfurt, Germany; Minsk, Belarus; Almaty, Kazakhstan; Moscow and Votkinsk, Russia; Kiev, Ukraine; Yokota, Japan; and Johnston Atoll in the southern Pacific Ocean.

Organizing the Work: The Mission Directorates

On the day after the agency's establishment, Davis convened DTRA's first senior-level staff meeting. It was routine, with operational status reports from each of the directors, support office chiefs, senior advisors, and comments from the director. However, it did reveal the new agency's organizational structure, or more specifically how the real work was being done. On that day, October 2, 1998, the agency senior leadership consisted of the director, deputy director, chief of staff, and senior advisors from the Departments of State and Energy and the FBI. The new agency's mission was being carried out in the eight mission directorates, the new advanced systems and concepts office, a business management office, and the director's personal and specialized staff offices. The Threat Reduction Advisory Committee was not part of the agency's organizational structure. It was a federally-charted advisory panel reporting to the Secretary of Defense, although by definition, it worked closely with the agency's senior leaders. Most of the new agency's people, money, and programs worked in the eight mission directorates. Understanding these directorates, their missions, programs, history, and size, in October 1998 is critical to understanding subsequent organizational changes in 1999-2000.

DTRA monitors the licensing and sale of critical defense technologies such as these five axis machines.

The Technology Security Directorate's mission was to serve as the DoD agent for developing and implementing technology security policies concerning the international transfer of defense-related goods, services, technologies, and munitions. These transfers are carried out through export licenses granted by the U.S. government to American companies dealing with foreign governments and their entities. During 1998, the men and women in this directorate reviewed and coordinated more than 21,000 export license applications for both military

and dual-use goods and technologies with officials in the Departments of State and Commerce. The Technology Security Directorate carried out four broad functions: license compliance, training, policy oversight, and monitoring. They also performed technical analyses used in developing the U.S. government's export control lists and regulations. David Tarbell led the directorate, which included 114 people as of October 1, 1998.[72]

The Cooperative Threat Reduction Directorate, consisting of 59 military and civilian personnel, had the mission of managing and implementing a major, multinational, congressionally mandated program that provided financial and managerial assistance to former Soviet nations to destroy their treaty-limited nuclear, chemical, and biological weapons of mass destruction and associated infrastructure. This directorate's program managers and staff experts worked with senior Defense and State Department policy officials and with national representatives in developing, and then implementing, specific programs, funds, equipment, and expertise that would assist those nations in their efforts to secure and protect their weapons of mass destruction against threats of proliferation. From 1992 through 1997, the CTR program provided $975 million in assistance to four states: Belarus, Kazakhstan, Russia, and Ukraine. Working closely with senior military and government officials in Belarus, Kazakhstan, and Ukraine, the agency's CTR program managers implemented a series of joint projects that had eliminated elements of those nation's strategic weapons systems, missile silos, and related infrastructure by the end of 1997. This assistance had enabled these three nations to become non-nuclear states under START I. From October 1998 to October 1999, the first fiscal year of DTRA's existence, Congress appropriated $440 million for the CTR program. Brigadier General Thomas E. Kuenning, Jr., USAF (Retired), led this directorate.[73]

The On-Site Inspection Directorate, with 763 people, was the largest of the DTRA mission directorates. Led by Rear Admiral Jacqueline O. Barnes, USN, this directorate's mission was a direct continuation of the work of the On-Site Inspection Agency: implementing the on-site inspection, monitoring, and escorting provisions of the INF, START I, CFE, Vienna Document, TTBT, and CWC arms control treaties and agreements. Simultaneously, the directorate planned, trained, and prepared to implement the Open Skies, START II, and Comprehensive Test Ban Treaty (CTBT) once they were ratified and entered into force. From 1998 to 1999, military and civilian personnel in this directorate, especially the Russian interpreters and linguists, worked closely with the program mangers in the CTR Directorate. In implementing the Chemical Weapons Convention, military officers and civilians worked closely with members of the Department of Commerce to devise policies and procedures affecting inspections of U.S. chemical industrial facilities. Another aspect of the federal government's

treaty preparations involved the Defense Treaty Inspection Readiness Program. This program is a major training and educational effort that provided seminars, briefings, and data on arms control treaty implementation and security countermeasures to people working at DoD and contractor facilities.[74]

Through DTRA's research efforts, soldiers can help limit the spread of nuclear, chemical, and biological contamination on the battlefield.

Three of DTRA's new directorates—Chemical-Biological (CB) Defense, Counterproliferation Support, and Force Protection—had discrete missions. Each developed specialized analytical programs, equipment, and concepts that would assist U.S. armed forces in countering attacks from weapons of mass destruction. The six people constituting the Chemical-Biological Defense Directorate were responsible for developing DoD's annual Chemical-Biological Defense Program. Coordinated throughout the department, the final program plan was jointly integrated with the military services' CB programs. The CB Defense Program had three critical objectives: to deter CB use against U.S. forces; to ensure that, if exposed to CB contamination, U.S. military forces could continue to fight; and, to support the military's efforts to protect their forces continuously. During the initial year, this directorate more than tripled in size. Colonel Edwin P. McDermott, USAF, was the Chemical-Biological Defense Directorate's first director.[75]

DTRA's Counterproliferation Support Directorate had a specific DoD mission: to define, advocate, focus, and accelerate the acquisition of state-of-the-art technologies that would improve force applications modeling capabilities; provide the combat commands with enhanced weapons and sensors for defeating the enemy's WMD facilities; and improve the capabilities of U.S. Special Operations Command forces. This directorate was the principal interface between the new agency and its military and intelligence customers concerning the development of sensors and intelligence systems for pre-, trans-, and post characterization of targets. In another major effort, the people in this directorate developed new fusing and penetrating weapons for operational use by the combatant military commands. At the agency's test ranges in New Mexico, weapons effects specialists designed and conducted integrated tests of new weapons technologies. Another program, the Data Archival and Retrieval Enhancement system, provided digital access to archived data that had been generated in special weapons effects tests and simulated experiments. Most aspects of the directorate's work came under one umbrella program, the DoD's Counterproliferation Support Program. Its customers were the military commanders-in-chief (CINCs) of the

combatant commands, and especially the commander-in-chief of the U.S. Special Operations Command. The directorate had 450 people, and it was led by Vayl S. Oxford.[76]

A specific instance during which Counterproliferation Support personnel worked directly with the CINCs came in the spring of 1999. The North Atlantic Treaty Organization (NATO) Alliance, for the first time in its history, authorized military action against a European nation. Serbian aggression in Kosovo triggered an intense aerial campaign, designated by NATO as Operation Allied Force. It included aircraft, pilots, and ground support personnel from nineteen nations and lasted from March 25 to June 20. The United States committed 22,500 Air Force, Army, Navy, and Marine Corps personnel in support of the 78-day campaign. DTRA contributed to Operation Allied Force at both the strategic and tactical levels. Strategically, DTRA deployed targeting teams to key Pentagon command centers and to the U.S. European Command (EUCOM) headquarters in Stuttgart, Germany. These teams used agency-developed computer programs called the Integrated Munitions Effects Assessment (IMEA) and Hazard Prediction and Assessment Capability (HPAC) to provide air planners with information about the best way to attack specific targets and the potential for collateral effects on the civilian population.[77]

In Kosovo, DTRA contributed to Operation Allied Force at both the strategic and tactical levels.

Tactically, DTRA provided the Air Force with recently developed munitions for use during the Kosovo air campaign. As part of the agency's technology development mission, DTRA had been developing advanced penetrating weapons since before the merger. By the spring of 1999, munitions in this program, called the Advanced Concept Technology Demonstration (ACTD), included Advanced Unitary Penetrators (smart bombs) and Hard Target Smart Fuzes that were able to strike at protected and/or deeply buried targets with precision. The U.S. Air Force used these munitions to attack and destroy targets that the Serbian leaders believed to be inaccessible and invulnerable. Following the successful air campaign, Lieutenant General Michael A. Canavan, USAF, the EUCOM chief of staff, remarked that DTRA's contribution provided American air forces with "advantages from advanced

technologies that, absent the ACTD program, would still be in development."[78]

DTRA's force protection experts analyze the effects of explosives on building structures.

The Force Protection Directorate had responsibility for developing and then conducting independent assessments of how American forces, based worldwide, were maintaining the physical security of their buildings, warehouses, dormitories, and other properties. In June 1996, foreign terrorists bombed Khobar Towers, an American military dormitory installation in Saudi Arabia, killing 19 airmen and injuring another 500 people. Within a year, Secretary Cohen had approved a new worldwide security assessment program for the Department of Defense. The Chairman of the Joint Chiefs of Staff was designated as the single point of contact for all force protection programs. In 1997, the Defense Special Weapons Agency, because of its experience in evaluating the blast effects of nuclear and conventional weapons, was assigned responsibility for conducting antiterrorism/force protection assessments at U.S. military bases, worldwide. DSWA established five seven-person assessment teams and began conducting approximately 80-100 assessments per year. Realizing the importance of force protection to U.S. military forces, DTRA planners made it a separate mission directorate in the new agency. Colonel Richard T. Kingman, USAF, served as the director of this 40-person organization.[79]

The Nuclear Support Directorate, led by Brigadier General Thomas F. Gioconda, USAF, was an organization with 244 people. Its mission was to provide operational and analytical support on nuclear matters to the Department of Defense's specified commands and organizations. Working to develop programs for sustaining the United States' nuclear deterrent forces made this directorate's mission one of the three major components of DTRA's fundamental mission. Significantly, it also made DTRA a Combat Support Agency, reporting directly to the Chairman, JCS for specific, designated nuclear weapons programs, and for other special weapons matters. During conflicts in the Persian Gulf, Bosnia, and Kosovo, the people in this directorate provided analytical support to the combat commanders planning and conducting military operations. The directorate also had mission responsibility for the DoD's nuclear stockpile stewardship obligations, which included providing consolidated guidance, coordination, technical advice, assistance, and data control for all nuclear weapons within the department's custody. It also supported, through its work with the military services and the Department of Energy, the development and publication

of the DoD standards, requirements, and operational procedures for dealing with the reliability, safety, security, use, control, logistics management, and disposal of nuclear weapons and their components.[80]

In the area of crisis response and consequence management planning for an incident involving weapons of mass destruction or a radiological accident, the Nuclear Support Directorate operated the DoD Joint Nuclear Accident Coordination Center. To validate this critical national emergency response work, the directorate devised, conducted, and participated in periodic exercises that tested the scope of emergency response operations, including site remediation. For the Chairman, JCS, members of the Nuclear Support Directorate conducted independent nuclear surety inspections of units responsible for assembling, maintaining, and storing nuclear weapon systems and components. Finally, the directorate operated the Defense Nuclear Weapons School at Kirtland Air Force Base, New Mexico, providing general nuclear weapons training and specific courses on nuclear weapons accident responses.

The Special Weapons Technology Directorate had a unique mission—direct responsibility for conducting a nuclear science and technology program designed to sustain the department's technical nuclear competencies. Further, the directorate conducted a research, development, test, and evaluation program for weapons of mass destruction and designated advanced special weapons. By using state-of-the-art modeling, simulation, and testing, technical experts in this directorate analyzed the lethality of conventional, biological, chemical, nuclear, radiological, and other advanced weapons against a range of targets in combat and terrorist situations. This technical and analytical expertise gave U.S. military commanders data and options for targeting underground and/or hardened structures. It also enhanced the commander's capability to evaluate and assess battle damage. The directorate operated DTRA's Scientific Computing Program, which worked closely with the DoD's High Performance Computing Modernization Program on research strategies for modernizing the department's most advanced computers. In addition, the directorate served as the Defense Department's focal point for development and acquisition of hardened, radiation-resistant microelectronics, electrical-optics, and other materials, that would be capable of operating in an environment of ionizing radiation and electromagnetic threats. Dr. Ullrich, a former DSWA director, led the 270 people who worked in this directorate.[81]

Agency Leadership and New Methodologies for Countering Terrorism

This simple narrative makes it clear that the new Defense Threat Reduction Agency had multiple missions: designated CINC combat support roles, assigned nuclear weapons responsibilities, congressionally-directed multinational cooperative threat reduction programs, legally-mandated monitoring of international treaties and agreements, and the implementation major development, acquisition, and testing programs. Leading the people carrying out these diverse missions, Davis thought, called for a leadership style that stressed decentralization of management, persuasion and consensus, team building, and when appropriate, the initiation of new programs outside of existing organizational structures.

In an interview, he explained the difference between directing an OSD agency and commanding a combat air wing. "This job," Davis asserted, "is not like a colonel being given an air wing to run. I don't mean to be disparaging, but I am pretty sure that if I were a colonel and I got my first air wing, somewhere there is a four-inch book that tells me how to run a wing. There isn't any book that tell you how to do DTRA."[82] He said that he trusted the year-long planning process that had created the agency; consequently, he did not make any immediate organizational changes. He did work to control the budget (the agency's submission to DoD), its corporate communications (the agency's identity), and the process of defining DTRA's future missions. Cohen, Hamre, and Gansler had been explicit in their reasons for establishing a new defense agency: it was to develop analytical and conceptual programs to reduce the threat from weapons of mass destruction, to prevent their spread, to deter their use, and to develop programs that would protect American forces and society. When they established the agency in October 1998, it was not just to achieve efficiencies from merging defense agencies and programs, but to act to reduce the WMD threat.

Not only was their rationale clear, but Gansler and Hamre held periodic individual meetings with Davis during the first year to provide advice, counsel, and their evaluation. "My personal role was strategic, not tactical," said Gansler.[83] In his sessions with Davis, Gansler recalled that they went over the new agency's budget, resource allocations, manpower, and other broad organizational issues. "Primarily, I wanted to focus Jay on what was the role and the mission of the new organization," Gansler explained. "How were we going to measure its success in four years, when we were finished."[84] They also concentrated on raising awareness of DTRA and its capabilities. "Getting the CINCs to recognize the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ASCO projects encourage alternative thinking, innovative strategies and cross-cutting approaches to WMD threats.

organization, to start asking for help, was an important measure of success," he thought. "Similarly, trying to run some major WMD exercises was an important one."[85] But perhaps the most important element of Gansler's sessions with Davis came in the areas of recognizing change and then in developing a strategy for leading the new organization. "Leadership says you actually want to make significant changes in direction, and that you have to have a realignment of all the organizations to the new direction. Then, they need to manage within those new directions," Gansler declared.[86]

Hamre recalled that he "tried to meet with Jay at least once a month … he needed to know the building [Pentagon], and the building needed to know that this [mission] constituted the secretary's highest priority."[87] In their monthly sessions, Hamre and Davis discussed approaches to structuring an analysis of biological and chemical terrorism. They examined the progress of DTRA's Advanced Systems and Concepts Office. They reviewed promising new technologies, and went over other specific, focused programs. From the beginning, Hamre had wanted to establish an intellectual center for these issues in the department, and he looked to Davis and the new agency to provide it. At one point, Hamre admitted, "Frankly, I met with him [Jay Davis] because it was the most intellectually vibrant and interesting stuff I was working on [in the Department of Defense]."[88]

Following the direction of Hamre and Gansler, Davis concentrated a part of his efforts during the first six months on establishing and energizing the Advanced Systems and Concept Office.[89] Its mission was to conduct end-to-end analysis of the emerging WMD threats and then to articulate future concepts and technologies to deal with them. End-to-end analysis meant developing a conceptual architecture for dealing with each type of threat – nuclear, biological, chemical, and other weapons of mass destruction. In Davis' opinion, the analysis would begin with a thorough examination of current intelligence and warning systems, proceed to investigate existing prevention efforts, and continue with a review and analysis of contemporary crisis management concepts. Further, the conceptual architecture would examine all elements of existing consequence management theory and practices, and would consider what new technologies and applications would be needed for successful retaliation.[90]

ASCO's first order of business was to work with the Threat Reduction Advisory Committee, led by General Welch. At the TRAC's initial meeting in July 1998, Welch had set up five panels: intelligence, biological warfare defense, nuclear sustainment, domestic preparedness, and counterproliferation.[91] Later, he and the advisory committee added an integration panel. Working in one or another of these panels, the advisory committee's nearly two dozen senior defense experts developed analyses and recommendations. The thirty DTRA scientists and experts assigned to ASCO supported the work of the TRAC panels, and they also worked independently on specific tasks recommended by the senior advisory panels.[92] In addition, ASCO's analysts began working with agency scientists and engineers on difficult problems in counterproliferation, special weapons, and weapons effects.

Dr. Victor A. Utgoff, former director of the Institute for Defense Analysis, led ASCO for its first year. He recruited scientists, bio-engineers, and specialists from academia, laboratories, and industry. They began analyzing the complex elements of the WMD threat against U.S. military and civilian populations. At one of ASCO's first meetings, Davis outlined for Utgoff and his new team of analysts a series of specific questions:[93]

- What is the role of DoD in responding to domestic terrorism?

- What are the technologies and systems needed for domestic preparedness against WMD threats?

- How can we establish links to existing biotechnical expertise?

- How do we sustain a robust and reliable nuclear deterrent?

- Can we adequately defeat improvised nuclear devices?

- How do we produce an integrated, transnational WMD threat assessment?

- How can DTRA develop as a focal point for WMD threat activities?

The director wanted these questions studied using the methodologies of end-to-end architecture. He knew that there were more questions than answers. Further, he acknowledged that turning the answers into useful new military products would take time, since the multi-layered DoD vetting process required that any new product be approved, funded, acquired, tested, produced, and fielded within the military services and the Defense Department. It was an extremely complex and time-consuming process. Consequently, Davis thought that two to five years would be needed for the emergence of specific new programs, technologies, and weapons. In his view, the entire process began with the analytical studies being instituted by ASCO's scientists and analysts.

Director's Status Report: First Six Months

On March 17, 1999, six months after DTRA's establishment, Davis wrote Hamre a five-page, single-spaced, state-of-the-agency letter.[94] He began by outlining the agency's institutional progress to date. There were two important organizational developments which, he believed, signaled DTRA's growing strength within the Department of Defense. First, General Gioconda, director of DTRA's Nuclear Support and Operations Directorate, had been named Deputy Assistant Secretary of Defense Programs at the Department of Energy. This "dual-hatting" would become significant, Davis thought, during the development and coordination of DoD's Nuclear Mission Management Plan between the two departments. Further, the recent Chiles Commission Report had called for a stronger relationship between the Energy and Defense Departments in support of nuclear skills, missions, and personnel development. It had other benefits, too, as DTRA and the Department of Energy had begun coordinating their activities in developing new technologies for detecting chemical/biological atmospheric dispersion patterns.

In another dual-position development, David Tarbell, head of DTRA's Technology Security Directorate, had been named as DoD's Deputy Under Secretary for Technology Security Policy. This change, Davis thought, came at an opportune time for the department, since the administration's policies and practices for monitoring satellite technologies were under intense congressional scrutiny. In a direct response to Congress, which had legislated in 1998 new controls on the transfer of critical satellite communications technologies, the Technology Security Directorate had begun staffing and training teams to monitor American communications satellites that were exported under U.S. government licenses.[95]

Other developments reflected growing recognition of DTRA's technical expertise in WMD matters. Davis told Hamre that DTRA's senior leaders had exchanged visits and command briefings with their counterparts at the U.S. Strategic Command in Omaha, Nebraska; U.S. Central Command in Tampa, Florida; and U.S. Atlantic Command in Norfolk, Virginia. He and the deputy director also had met with the staff of the National Security Council, members of the Defense Science Board, and members of the Deutch-Specter Commission on the Organization of the Federal Government in Combating the Proliferation of Weapons of Mass Destruction. Meeting with Admiral Harold W. Gehman, USN, Commander of the U.S. Atlantic Command, Davis explained DTRA's experience in creating emergency response exercise scenarios. This experience, he

suggested, might be useful to the Atlantic Command's new Joint Task Force-Civil Support (JTF-CS). In an open letter to all agency personnel, Davis wrote, "It is clear that we are eagerly desired as a partner and viewed as a valuable player. As an agency, we are shifting from establishment and integration to the next level, outreach and accomplishment—this as a new agency, not as a legacy of our separate pasts."[96]

Directorates 1998	Directorates 1999
Chemical-Biological Defense	Chemical-Biological Defense
Cooperative Threat Reduction	Cooperative Threat Reduction
On-Site Inspection	On-Site Inspection
Nuclear Support	Nuclear Support & Operations
Technology Security	Technology Security
Counterproliferation Support	Counterproliferation Support & Operations
Force Protection	
Special Weapons Technology	

In his letter to Hamre, Davis also explained his rationale for a major reorganization of the agency. He and General Moore had decided to reduce DTRA's mission directorates from eight to six. Force Protection and Counterproliferation Support had been dissolved as directorates. Their people and resources were moved into the Special Weapons Technology Directorate, which was simultaneously renamed the Counterproliferation Support and Operations Directorate. The mission of this new directorate was to reduce the WMD threat by developing ways to prevent their use and to protect against their effects. To lead the new directorate, Davis and Moore selected Colonel Hopkins, then DTRA's chief of staff. In 1998, Hopkins had been a key member of DTRA's task force organizing the agency. In another structural change, Davis and Moore renamed another key directorate, Nuclear Support, as the Nuclear Support and Operations Directorate. Finally, in a major personnel change, they announced the reassignment of Dr. Ullrich, head of the former Special Weapons Technology Directorate. Henceforth, he would work in the director's office as the Senior Advisor for Science and Technology.

In the letter, Davis said that he had decided against carrying out one of the DTRA's fundamental planning assumptions—that all Washington-based agency personnel would be consolidated in leased office buildings at Dulles International Airport. He told Hamre that the Dulles buildings were unsafe, and that they did not even meet DoD's minimal force protection standards. Consequently, he suggested one of two alternative sites—either the U.S. Naval Station in Washington, D.C., or a new building at Fort Belvoir, Virginia. In fact, Davis had already acted, requesting that funds be placed in the agency's fiscal year (FY) 2001 military construction budget for the initial design of a new DTRA headquarters facility.

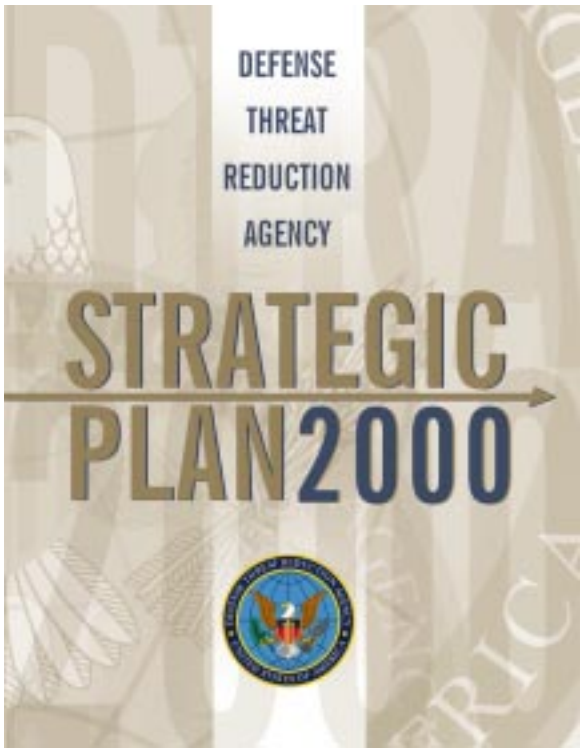
Finally, Davis told Hamre of one other important institutional change—the creation of a DTRA Office of CINC Support within the Nuclear Support and Operations Directorate. This new office would work with the CINC staffs to integrate and coordinate DTRA's operational capabilities and research and development projects in their mission areas and regions. According to General Welch, this was a new development. "At the time DTRA came together," he recalled, "I don't think that the CINCs were given much thought as to being in the loop."[97] He credited Davis specifically with recognizing the importance of reaching out to the CINCs, who have the war-fighting mission for the nation. Hamre concurred: "Jay Davis, who is a very thoughtful and a smart guy, came to realize that the center of gravity in the department had shifted to the CINCs."[98] Hamre credited him with taking the "energy" in the mission areas of force protection, restoration of operations, and other programs, and pulling the entire agency in the new direction of working with the CINCs. He concluded: "I think that was really important."[99] Finally in the state-of-the-agency letter, Davis announced that he and the senior staff would begin developing the agency's first strategic plan in order to define DTRA's goals, strategies and values.[100]

The First Strategic Plan

In recent years, strategic plans have been used throughout industry, government, and institutions as a way to express organizational goals, strategies, and values. Usually published and distributed widely, strategic plans provide the public, customers, management, and employees with a clear set of an organization's objectives. Developing a strategic plan is a major effort, usually lasting months and involving dozens or more people inside and outside of the organization. Through group discussions, deliberations, and decisions about the agency's present and future missions, DTRA's first strategic plan became both a process and a product.

When he began the strategic planning process in January 1999, Davis explained, "In building DTRA, I had several goals for the planning process. Any strategic plan should express the long-term goals of the organization, those that underlie its existence and missions, and the operational values of its leaders."[101] The architects of DTRA's first strategic plan were the director, deputy director, leaders of the six mission directorates, senior advisors, and selected senior functional managers. Representatives of DTRA's Quality Management office facilitated the process. They met on Friday afternoons, approximately every three weeks for six months. The process was iterative, with consensus developing gradually on the agency's major goals, values, and strategies. Early in the process, the group decided that the strategic plan would not be another agency mission statement, listing every activity of the organization. This was an important distinction for Davis, who concluded that, "the plan does not so much state the whole of the tasks of the agency as it states those that drive change and shape DTRA to better do its assigned mission."[102]

In September, the director met with the senior staff and personally briefed the proposed seven major goals and supporting strategies identified during the seven-month strategic planning process. He told them to review each goal and accompanying strategy, and then to develop specific, quantifiable tasks that DTRA would need to reach its objectives. Workers in the directorates and business management offices responded quickly; they submitted numerous tasks. In the end, there were so many recommended tasks that the director decided to hold a two-day, off-site meeting in mid-January 2000 in to prioritize them and finalize the plan. Following that decisive meeting, the plan was coordinated within the Defense Department, and prepared for publication. In late February and early March, Davis, the agency's mission directors, and office chiefs held a series of meetings with the employees and briefed them on the strategic plan.[103]



DTRA's senior leadership worked for nearly a year developing the first strategic plan.

DTRA's *Strategic Plan 2000* was published on March 6, 2000. By coincidence, that was the same the day as a scheduled meeting for all Washington-based DTRA employees. Dr. Hamre was invited for a special tribute. Introduced by Davis as "the father of DTRA," Hamre recalled the day in the fall of 1998 when the secretary of defense had established the new agency. "Among my proudest moments as the deputy secretary of defense," he declared, "was to stand among many of you in a

hanger at Dulles airport during your stand-up ceremony in October 1998. That day, more than any other in recent memory, represents the Defense Department's resolve to shape and define the future."[104]

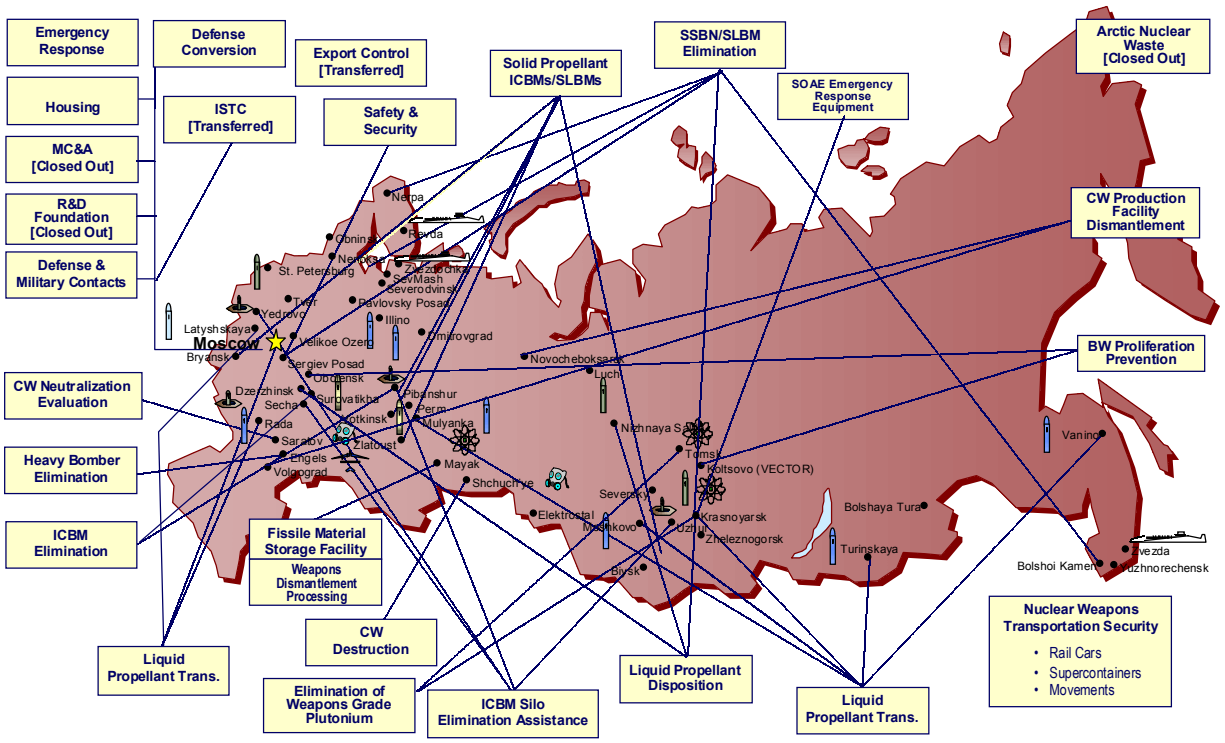
Now, eighteen months later, he was returning to present the agency with a Department of Defense Joint Meritorious Unit Award. After apologizing for turning everyone's life "upside down," he then said, "I couldn't be happier with the outcome."[105] Characteristically, he applauded those doing the real work—Technology Security's people for specific improvements in export controls; Counterproliferation Support and Operations for their contributions to the unified commands fighting the Kosovo combat air campaign; Cooperative Threat Reduction for continuing the managerial dialogue with Russian officials over weapons reductions during the Kosovo war against Yugoslavia; Chemical-Biological Defense for analyzing the future threat; Nuclear Support and Operations for improving the security of the nation's nuclear stockpile; and On-Site Inspection for maintaining discipline in carrying out treaties with the Russian government. When it came time to present the award, Hamre asked Davis and Moore to accept it on behalf of the agency. Looking at them directly, Hamre declared, "You are involved in the most important work the department has to do now."[106]

The Mission: Continuities and Changes

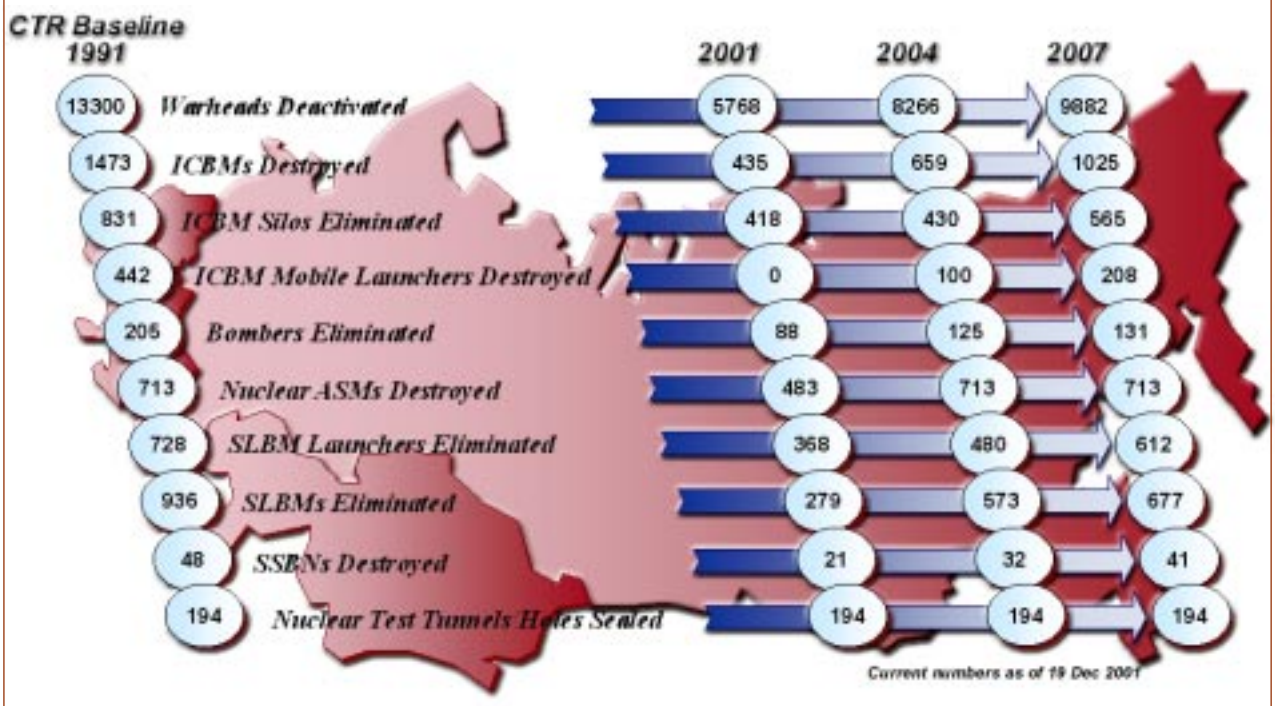
While the departmental award and the deputy secretary's accolades were important, they only reflected the continuing significance of carrying out the agency's day-to-day missions. In March 2000, for instance, senior officers in the CTR Directorate briefed the director on the President's FY 2001 budget request to Congress for $458.4 million to assist Russia, Ukraine, and Kazakhstan in accelerating the reduction of their strategic weapons under the START I treaty. They outlined specific programs to improve the safety, security, control, accounting, and centralization of nuclear weapons and fissile materials, and to prevent proliferation of chemical and biological weapons. By 2000, the United States' CTR program had provided nearly $1 billion in assistance in removing 4,918 nuclear warheads, eliminating 384 intercontinental ballistic missiles (ICBMs), 354 ICBM silos, 390 ICBM mobile launchers, 57 strategic bombers, 12 nuclear-powered ballistic missile submarines (SSBNs), 240 submarine-launched ballistic missile (SLBM) launchers and 99 SLBMs.

In Kazakhstan, the CTR program had provided funds to seal off, and thus eliminate, 191 nuclear testing tunnels.[107] General Henry H. Shelton, USAF,

The Cooperative Threat Reduction Program



CTR Sites



CTR Status

Chairman of the JCS, wrote U.S. Senator Richard G. Lugar in March 2000, in support of the program. "The military continues to strongly support this (CTR) program," he explained, "the program is the key reason Ukraine, Belarus, and Kazakhstan are now nuclear free…. CTR is the critical ingredient allowing Russia to accelerate its reductions to START I limits, and therefore, the United States to do the same." Further, the chairman told the Senator that, "without CTR it is highly unlikely that Russia would be able to meet its START mandated reductions…. Critical CTR programs are decreasing the likelihood of proliferation by improving the safety and security of Russia's WMD stockpile." Finally, Shelton concluded: "While reaching and sustaining agreements with the Russians is at times challenging, the end results are worth the effort."[108]

The On-Site Inspection Directorate, during the same period, was fully engaged in monitoring nuclear, chemical, and conventional arms control treaties. Under START I, the five signatory nations—United States, Russia, Belarus, Ukraine, and Kazakhstan—had significantly reduced their strategic nuclear weapon systems by January 2000. The United States had cut its strategic nuclear delivery vehicles from 2,246 in 1990 to 1,451 in 2000, while Russia and the other treaty states had reduced their total strategic arsenals from 2,500 to 1,404. Belarus, Ukraine, and Kazakhstan had removed all of their strategic nuclear delivery vehicles from their respective territories. Under the CFE Treaty, the 30 signatory nations had eliminated more than 70,000 conventional arms, specifically tanks, artillery, armored combat vehicles, attack helicopters, and fighter aircraft by January 2000. When the Chemical Weapons Convention entered into force in April 1997, the United States declared that it possessed 28,566 tons of chemical weapons; by June 2000, it had destroyed 5,741 tons. Every destruction had been monitored by an international inspectorate, escorted by members of the On-Site Inspection Directorate. Under all these major arms control treaties, DTRA personnel comprised the bulk of U.S. inspectors and escorts monitoring compliance. Throughout the year 2000, personnel were actively training to implement another major agreement, the Open Skies Treaty. While awaiting final ratification of this 27-nation treaty, the United States organized and flew joint trial flights for training. During the year, the United States flew major joint trail flights in Germany and other nations, and hosted the Russian Open Skies aircraft and inspection team during its joint trial flight over the United States.[109]

All of these international treaties required considerable nation-to-nation diplomatic and military coordination. DTRA maintained offices in U.S. embassies in Moscow, Kiev, and Almaty, working closely with the arriving and departing inspection teams, CTR delegations, and other official visitors. Military and civilian DTRA personnel provided critical, official links with the respective national governments, their military services, and specific government departments and

The START Treaty

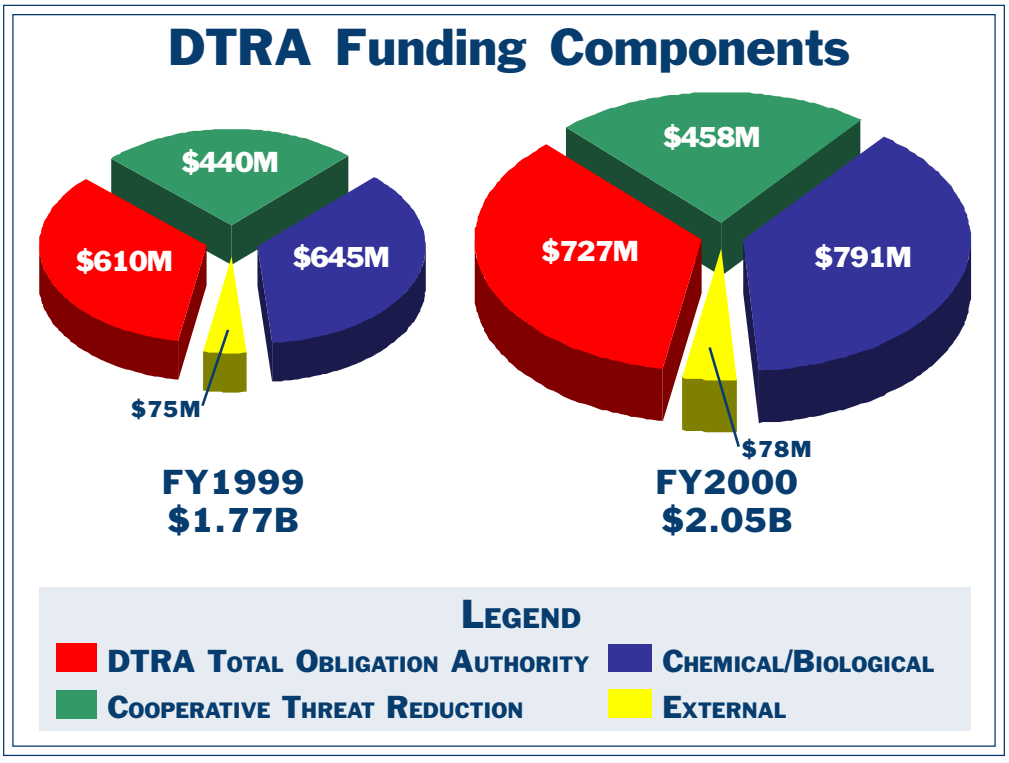
START Sites in Russia, Belarus, Kazakhstan & Ukraine

START Sites in the United States

agencies. During 1999-2000, the Moscow office assisted more than 100 treaty inspection teams, and coordinated the work of over 500 CTR officials traveling to Russia.[110]

In the new nations of Eastern Europe, the Baltic, and Central Asia, there was a serious and constant concern about the smuggling and illicit movement of nuclear, chemical, or biological weapons or materials across borders. In response to this international threat of proliferation, the U.S. government developed a multinational program in cooperation with these new nations. Within the U.S. government it was joint program of the DoD and the U.S. Customs Service, with DTRA's On-Site Inspection Directorate serving as program manger. Essentially, the program provided equipment and training in detecting, preventing, and investigating the illicit movement of WMD materials across national borders. The program worked without fanfare until an incident on the Uzebkistan-Kazakhstan border in May 2000. In that month, Uzbekistani customs officials on the border seized ten lead-lined containers filled with radioactive materials.[111] This was a major seizure, and it focused attention on the program. Other nations receiving training and equipment under this program were Hungary, Slovakia, Bulgaria, Romania, Kazakhstan, Kyrgyzstan, Georgia, Azerbaijan, Moldova, Lithuania, and Slovenia.

Representatives from some of these nations, plus senior diplomats from Russia, Ukraine, Egypt, and United Nations, joined senior U.S. government and industry



officials at DTRA's Ninth Annual International Conference on Controlling Arms, held in Norfolk, Virginia in early June 2000.[112] Stressing the importance of technology, which was a major theme, Dr. Charles R. Gallaway, chief of DTRA's Arms Control Technology division, observed that "technology must be negotiated into arms control treaties or it does not count. The technology community must show policy planners what can be done with the new technology."[113]

Every two years, the Joint Chiefs of Staff send an evaluation team to examine the effectiveness of each of DoD's five combat support agencies—the Defense Intelligence Agency, the Defense Logistics Agency, the Defense Information Systems Agency, the National Imagery and Mapping Agency, and the Defense Threat Reduction Agency. Required by law, the JCS assessments evaluate the combat support agencies' responsiveness and readiness to support operational forces in the event of war or threat to national security.[114] DTRA was subject to its first JCS Combat Support Agency Review during February-March 2000. The assessment team focused on the combat support missions in DTRA's Nuclear Support and Counterproliferation Support directorates. The results were announced in a letter from General Shelton to the secretary of defense on March 28.[115] The JCS assessment concluded that DTRA should continue its WMD technology programs, and continue providing the combatant commands with information on emerging radiological, chemical, and biological threats. It further recommended that the secretary of defense reexamine the current, complex division of DoD's counterproliferation roles and missions, identifying the need for better doctrine, improved requirements planning, more accurate assessment of capabilities, and better coordination with the combatant commands. To help define command relationships for managing the consequences of a domestic WMD crisis, the assessment team recommended that DTRA establish a supporting command relationship with the U.S. Joint Forces Command (the former U.S. Atlantic Command). Finally, the JCS assessment commended Davis for DTRA's transformation and concluded that the agency must continue to address the complex WMD threat.[116]

The JCS Combat Support Agency Review coincided with publication of the agency's recently completed *Strategic Plan 2000,* in which DTRA committed to supporting the "viability and credibility" of the U.S. nuclear force. Further, the plan stated that DTRA would "organize and prepare" to support civil and military responses to WMD crises by building on its relationships with the U.S. Joint Forces Command, the FBI, and the Federal Emergency Management Agency (FEMA).[117] In fact, considerable work had already been done. In the fall and winter of 1999, DTRA's leaders, analysts, and disaster exercise experts had developed a major new crisis response study which influenced national policy at the highest levels of the U.S. government.

Like many influential studies, this one was drawn from reality. In August 1999 there was a massive earthquake in eastern Turkey. More than 17,000 people were killed and in excess of 50,000 left homeless. It shattered the Turkish citizens' confidence in their national, state, and local governments. Because of their inept and inadequate response, all elements of the Turkish government were condemned—politicians, police, fire, army, and civil disaster officials. In late August, President Clinton discussed the Turkish earthquake with the senior members of the National Security Council. The president asked what kind of disaster could happen in the United States that would cause American citizens to lose confidence in their government.[118] Within a few days, the president's question had arrived at DTRA. "We got a direct tasking through the NSC," Davis recalled, "to go to work on a scenario of a nuclear detonation in a U.S. city." Part of the tasking came directly from the President—"Don't do it in New York, don't do Washington, …do it in the heartland … in Cincinnati."[119] So in the fall of 1999, Davis, ASCO analysts, Counterproliferation Support specialists, and Nuclear Support exercise experts created a theoretical scenario of an urban nuclear terrorist disaster and the federal government's responses. Known as the Cincinnati Study, it became, over the next year and a half, one of the most important crisis response studies of the Clinton administration.

DTRA's director became a direct participant in the effort. He helped create the study's scenario, briefed it to senior government officials, and responded to their direct tasking. It was a team effort, but one in which the director, who was educated as a nuclear physicist, was on the team. "You asked if I was involved," Davis recalled. "I drove the study at one point. I told them, take this weapon, put it there, give us a set of timelines day-by-day: dead, wounded, and the consequences. The team then put together a scenario of about fifteen viewgraphs, and we took them to the NSC."[120] At the National Security Council, Richard Clarke, the president's National Coordinator for Security, Infrastructure Protection, and Counterterrorism, listened, asked questions, and then told Davis and the agency team to refine the study to better answer the question: What difference would the federal government's resources make in responding to this crisis?

The next week, Davis and his team briefed Deputy Secretary of Defense Hamre. The briefing, which described the consequences of a nuclear detonation by a terrorist and the probable responses by local, state, and federal officials, had a profound effect on him. A year-and-a-half later, Hamre recalled, "First of all, it disturbed me terribly because of what it said about how profoundly difficult it would be to cope with a nuclear crisis, and how poorly we are prepared as a federal government."[121] Next, Hamre saw that he could use this briefing and its conclusions to force the department to alter how it was currently preparing for

the new, emerging homeland defense mission. At the end of the briefing, Hamre told him, "Jay, just sit here," and turning to his aide, said: "Get me Janet Reno on the telephone as soon as you can." Under a presidential decision directive, Attorney General Janet Reno was the senior federal official responsible for coordinating all operations and support during a domestic crisis. Hamre told Reno, "I've just seen a briefing and you have to see it. This briefing, more than anything else, will give you a sense of what it is we are looking at."[122]

Attorney General Janet Reno

In late January 2000, Davis traveled to the Justice Department and personally briefed Attorney General Reno on the Cincinnati Study. One-on-one in her office, they went through the nuclear terrorist scenario. At the end, the attorney general said that the analysis was so profound that she would convene an all-day session of senior civilian and military officials to go through the issues, problems, responses, and consequences. On a Saturday early in February, the group met in the secretary of defense's conference room. Attending were the attorney general, deputy secretary of defense, vice chairman of the Joint Chiefs of Staff, deputy director of the FBI, commander of the Joint Forces Command, chief of the JTF-CS, and that command's political, legal, and public affairs officers. Senior FEMA officials did not attend. The group went through the study step-by-step. According to Davis, "We spent about six or seven hours on that Saturday stepping through the scenario…. At each step we asked, what political questions have arisen? What operational questions have arisen? Are there legal questions? What events have happened that we never anticipated? What resources do we need to have pre-planned?"[123]

As they worked through the operational and political issues, Davis explained, the group found that they had to think through and pre-plan not just the operational responses, but also the information flow to the media and the public. Public confidence in the government was critical to achieving both the operational and political responses. Finally, Davis recalled, "We came back to the president's fundamental question: How do you keep the government from suffering a loss of confidence?" Collectively, the group determined that the government had to think through the event before it happened. Later, Davis reflected on the significance of these briefings for the agency. By raising these profound issues in front of the attorney general, deputy secretary of defense, senior law enforcement officials, and senior military commanders and their staffs, he concluded that, "If we didn't have the answers, we sure as hell had defined the problem!"[124]

The analytical work of DTRA on crisis response did not end with this session. In January 2001, the director, agency analysts, and the exercise experts briefed a biological terrorism study to senior-level officials at Fort McNair, Washington, D.C. Present were the attorney general, secretary of transportation, director of FEMA, director of the Center for Disease Control, and other senior government managers. At this briefing, many of the same operational, political, medical, and public information questions were raised. Davis thought that in this session, and the earlier ones, his agency "had put the government on a new path. The problem is not solved, but we put the government on the path to having answers at hand about what it can do if the event happens. Even more importantly, we will have explained to the National Command Authority what it is possible to do."[125]

At DTRA, some work had already been done. On October 1, 1999, Davis had set up a special agency task force, called the Consequence Management Advisory Team (CMAT). This new team would work closely with the U.S. Joint Forces Command's Joint Task Force-Civil Support and any of the CINCs who requested assistance. Then in early March 2000, the agency's CMAT team deployed to the Joint Warfighting Center in Suffolk, Virginia, in support of the JTF-CS for a command post exercise testing how the task force would support a WMD crisis.[126] Two months later in May 2000, the team deployed again, this time to participate in a large, 10-day multi-agency crisis and consequence management exercise. The object was to test the capability of federal, state, and local officials to respond to a series of no-notice, geographically dispersed terrorist threats and attacks across the United States.

Federal, state, and local officials set up mock command centers, like the one pictured here, in several cities across the United States during Operation TOPOFF 2000.

Named Operation TOPOFF 2000 (shorthand for top officials), the simulated terrorist events took place in Portsmouth, New Hampshire; Denver, Colorado; and Landover, Maryland. DTRA deployed twelve people to Portsmouth, where they worked with elements of the U.S. Joint Forces Command's JTF-CS.[127] Specifically, DTRA's Consequence Management Advisory Team provided senior officials with computer modeling and simulation analysis of local weather, geography, and potentially hazardous gases. This analysis gave key officials a more precise definition of the threat than they had previously had. Using two agency-developed technologies, the Hazard Prediction Assessment Capabilities and the Consequence

Assessment Tool Set, the DTRA team contributed technical expertise to the simulated crisis. Agency lawyers and public affairs specialists also augmented the JTF-CS staff throughout this significant WMD exercise. In the months following Operation TOPOFF 2000, a series of important joint-support agreements were developed and signed between DTRA and the U.S. Joint Forces Command.

In addition, this high-level exercise unquestionably contributed to the success of DTRA's annual Weapons of Mass Destruction Response Symposium held in Albuquerque, New Mexico, in July 2000. More than 220 people attended, representing all of the military services, defense agencies, FBI, Justice Department, and other federal departments. Mike Evenson, deputy director of the Nuclear Support and Operations Directorate, opened the symposium and reminded the participants that, "DTRA doesn't do consequence management itself…. We're not the first responders. DTRA, however, was involved in planning, training, and conducting exercises for a WMD terrorist or accidental event."[128] Evenson told the symposium, "When we talk about a WMD event, it won't be with 20 or 100 people affected. It will be 120,000 people or more, with another 48,000 dying in about 48 hours after the event. With staggering numbers of people needing assistance, we need to ensure that we in DoD don't have to call more than one phone number to get help for our people."[129] Charles Cragin, acting assistant to the secretary of defense for civil support, further stated, "In civil support, DoD is not and does not want to be in charge. We are only there to support the local and state authorities." [130]

The Space Launch Monitoring Division of the Technology Security directorate monitored the March 27, 1999 launch of this Zenit-3SL rocket off the coast of California.

This WMD Response symposium was held at DTRA's Defense Nuclear Weapons School. In 1999, that school had developed a new course on space launch monitoring. In 1998, Congress had written explicit language into the National Defense Authorization Act for FY 1999. The act directed the Defense Department to establish a technology security program to monitor the activities of U.S. aerospace companies participating under federal license in communications satellite manufacturing and launch activities with foreign nations. DTRA received this new congressionally-directed mission and David Tarbell, director of DTRA's Technology Security Directorate, established a new division, Space Launch Monitoring, to implement the law. Colonel David Garner, USAF, led the effort, organizing six monitoring teams, consisting of a team chief, launch vehicle engineer, satellite engineer, aerospace specialist, and a security expert. Since the newly-

recruited teams had considerable technical experience in U.S. military and commercial space launch programs, their training concentrated on specific congressional requirements, the licensing process, program familiarization, and mission planning. It was not all training, however. Since U.S. corporations already had active programs with several foreign nations to launch U.S.-manufactured communications satellites, DTRA's space launch monitoring teams were active in the program's initial months. During 1999 and 2000, agency teams deployed to conduct training at U.S. manufacturing plants, to participate in technical interchange meetings, and to monitor on-site the actual communications satellite missile launches in Baikonur, Kazakhstan; Plestetsk, Russia; and on the consortium's launch ship in the Pacific Ocean.[131]

In the area of chemical-biological defense, the agency developed and led a large, complex advanced concept technology demonstration program called Restoration of Operations (RestOps). Led by David G. Harrison of the agency's Chemical-Biological Defense Directorate, this technology demonstration program grew out of a series of analytical studies following the 1991 Gulf War. By the late-1990s, the U.S. military combat commands had begun demanding improved chemical-biological defensive technologies, and the tactics, techniques, and procedures to use them effectively. Harrison's comprehensive program had four elements. First, prior to a chemical or biological attack, it would provide equipment to protect military personnel and sensitive combat material. Next, if an attack were imminent, it would detect, identify, and warn the command of the character and severity of the event. Then, if the attack occurred, it would decontaminate people, critical equipment and facilities, and restore operations rapidly. Finally, it would provide analytical computer technology to analyze the impact of the chemical or biological attack on operational, logistical, and medical operations during the attack. It was a sweeping concept, one with direct application for reducing real threats to U.S. military forces deployed around the world.

In April 1999, Lieutenant General Randolph W. House, USA, deputy commander-in-chief of U.S. Pacific Command, requested that the RestOps concept be tested at Osan Air Base in South Korea. DTRA was designated as the executive agent for the program; the U.S. Air Force was the lead military service; U.S. Pacific Command was the sponsoring operational command; U.S. Central Command was a supporting command; U.S. Army Dugway Proving Ground was the technical evaluator; and the U.S. Air Force Operational Test and Evaluation Center was designated as the military utility advisor. In February 2000, Joseph J. Eash, III, Deputy Under Secretary of Defense for Advanced Technology, directed DTRA to undertake a three-year, $57 million series of exercises, tests, and demonstrations on the RestOps program. Since then, the U.S. Pacific Command reevaluated its chemical-biological defenses, and developed new chemical-biological

components for future operational exercises. DTRA procured the critical technologies, and the U.S. Army's Dugway Proving Ground started testing numerous new protection, detection, and decontamination systems at its Joint Chemical Trials in the summer and fall of 2000. All of this activity led to a decision to schedule a major RestOps baseline exercise with the Air Force's 51st Fighter Wing in early 2001 in South Korea.[132]

To summarize all of DTRA's mission activities into a single concluding paragraph is impossible. Suffice it to say that the people, military and civilians, working in DTRA's mission directorates continued to carry out all of the new congressionally-directed threat reduction programs, legally-mandated treaty missions, JCS-assigned combat support roles, counterproliferation measures, and chemical demonstration projects with the same thoroughness and professionalism that they had exhibited in the past. At the same time, there had been significant developments in the agency's newest mission, conceptualizing and analyzing the WMD threat to the nation and its military forces. It had been defined and articulated at the highest levels of the national government. In this area, DTRA was now seen as a serious proponent for a rigorous national effort to analyze, plan, and prepare for the threat from terrorists using weapons of mass destruction against the United States.

Entering DTRA's Third Year: Major Reorganization

On September 26, 2000, four days before the agency entered its third year, Dr. Davis and Major General Robert P. Bongiovi, USAF, DTRA's new deputy director, announced another major agency reorganization.[133] In scope and concept, the changes constituted the largest restructuring since DTRA was established in October 1998. In an electronic message to all employees, Davis explained the external and internal pressures causing the changes. He cited the continuing reassessment of DTRA's strategic plan, the favorable results of the JCS Combat Support Agency Review team's report, the impact of the Clinger-Cohen Act on managing federal information technology, the Defense Science Board's review of the agency's simulation activities, and the continuing pressure to comply with DoD's emphasis on best business practices.[134] As with the agency's first strategic plan, the reorganization was the product of an internal planning process.

Major General Robert P. Bongiovi, USAF, DTRA's second deputy director

Over the summer months, Bongiovi had analyzed the agency's existing structure and found a dilemma. DTRA had been created from multiple organizations with different identities; now it had one identity—threat reduction—but multiple personalities. He proposed a rigorous analysis of the agency's mission essential tasks, its current strategies, its customers and enablers, and most significantly, its current relationships and responsibilities. Further, he recommended an examination of the agency's supporting tasks and key processes. Bongiovi presented his analysis to a small senior-level group (the director, deputy, chief of staff, mission directors, business office chiefs, and selected senior staff) at a day-long, off-site meeting in early August 2000.[135] Using his analysis as a starting point, the director, deputy director, and the group reviewed each of the major mission and support areas, and concluded that a major agency restructuring should be considered. This senior group met periodically in August and September 2000. What emerged was an important new construct for conceptualizing and organizing the agency's mission areas.

DTRA assesses the effects of various high explosive weapons through blast tests at its Albuquerque test site.

Henceforth, DTRA would have four "core" missions: WMD combat support, technology development, threat control, and threat reduction.[136] In the first area, WMD combat support, the emphasis was on DTRA's mission to provide combat support to the Joint Chiefs of Staff, CINCs, and the military services that were facing WMD threats to their forces. Accordingly, the senior group recommended that the director dissolve the Nuclear Support and Operations Directorate and replace it with a new WMD Combat Support Directorate. This new directorate would inherit all of the CINC combat support functions and acquire responsibility for force protection, survivability assessments, the agency's operations center, and the CINC Liaison Office.

The second core mission area, technology development, represented an attempt by agency leaders to align into a single organization the people responsible for carrying out the agency's complex research and development (R&D) programs and for providing the technologies used in WMD combat support and threat reduction mission areas. Known as the Technology Development Directorate, this new organization inherited most of the Counterproliferation Support Directorate's R&D functions, the nuclear survivability functions and technologies from the former Nuclear Support and

Operations Directorate, and the research programs associated with arms control treaties.

The third core mission area, threat control, was simply a conceptual grouping of two existing directorates—Technology Security and On-Site Inspection. In fact, these two directorates were so distinct in their functions that they retained their names and remained organizationally separate. The fourth core mission

Directorates 1999	Directorates 2000
Chemical-Biological Defense	Chemical-Biological Defense
Cooperative Threat Reduction	Cooperative Threat Reduction
Nuclear Support & Operations	Combat Support
On-Site Inspection	On-Site Inspection
Technology Security	Technology Security
Counterproliferation Support & Operations	Technology Development
	Acquisition Management
	Resource Management

area was threat reduction. Here the existing Cooperative Threat Reduction Directorate retained its special mission of providing assistance to the eligible states of the former Soviet Union as they dismantled their weapons of mass destruction and reduced the threat from proliferation. A sixth directorate, the Chemical-Biological Directorate, provided direction for development and acquisition of DoD's chemical and biological systems for the military services and combatant commands. So, after all the changes, DTRA would have four core missions - WMD combat support, technology development, threat control, and threat reduction, organized into six mission directorates - Combat Support, Technology Development, Technology Security, On-Site Inspection, Cooperative Threat Reduction, and Chemical-Biological Defense.

In early August, Bongiovi recommended that Davis set up two new agency leadership groups to provide the director and senior leadership with better internal

communications, advice on strategic planning, and managerial insights.[137] There were two reasons behind the deputy director's recommendations. In February, an agency-wide survey had shown that there was a major problem with interagency personal communications, especially between mid-level and senior managers. To resolve it, the director established the DTRA Corporate Council in September 2000. This new council was a large group of thirty-two senior and mid-level managers, consisting of the director, deputy director, chief of staff, senior advisors, mission directors, special and personal staff officers, and the chief of the advanced concepts office. It would meet monthly, addressing specific issues and advising the director and his senior leaders on corporate planning, policies, and agency/program performance.[138]

The second new leadership group was designated the DTRA Board of Advisors.[139] It grew out of Bongiovi's and Davis's desire to have a separate senior managerial group that would advise and work with them to make the strategic planning process the driving force in planning the agency's future. The function of this smaller group of approximately 14 senior managers (the director, deputy director, chief of staff, mission directors, and business office chiefs) was to continue refining the agency's strategic plan and to assist the director in defining new mission opportunities and future scenarios. These two new groups, especially the Board of Advisors, discussed the details and rational for the agency's major "core" mission reorganization, discussed above. Finally, when all of the discussions, refinements, and internal vetting had been completed, DTRA's reorganization was announced to all agency employees on September 26, 2000.

On that day, Davis and Bongiovi explained, via an agency-wide e-mail, the new "core" missions concept, the organizational changes in the mission directorates, the new managerial council and advisory board, and the elevation of three major headquarters functions—resource management, acquisition management, and information systems—to business directorate status.[140] The last element signaled a major status change, elevating those important enabling divisions to directorates. The new Resource Management Directorate combined the functions of financial management, manpower and personnel management. The second, the Acquisition Management Directorate, expanded the mission and organizational stature of the former acquisition management division by including responsibilities for program management, training, and better business practices. It also would have a larger role in agency program planning and management. The third organizational change created an Information Systems Directorate. This change recognized the major role that computers and communications now played in the agency and the conduct of its missions and business. Further, the action responded directly to the Clinger-Cohen Act, which sought to elevate the status of information management functions within federal government departments and agencies.

As a result of all of these changes, DTRA entered its third year with six mission directorates, three business directorates, an advanced systems and concepts office, senior advisors, a board of advisors, and a corporate council. The Threat Reduction Advisory Committee remained intact.

Relocating the Agency

Upon its establishment, the Defense Threat Reduction Agency maintained its headquarters, business and security offices, and three mission directorates at Washington Dulles International Airport, located approximately twenty-five miles west of Washington, D.C. In March 1999, Davis had recommended to Hamre that the agency move its headquarters and Dulles-based personnel, either to Fort Belvoir in the Virginia suburbs or the U.S. Naval Station in Washington, D.C. He had two reasons. First, the Dulles site did not meet even minimal DoD force protection standards for physical security and safety, whereas a new building, on either military post, would meet the standards when placed inside a fenced area, with manned, controlled access security systems. Davis' second reason grew out of his personal experience in working for nearly 25 years at Lawrence Livermore National Laboratories in California. He

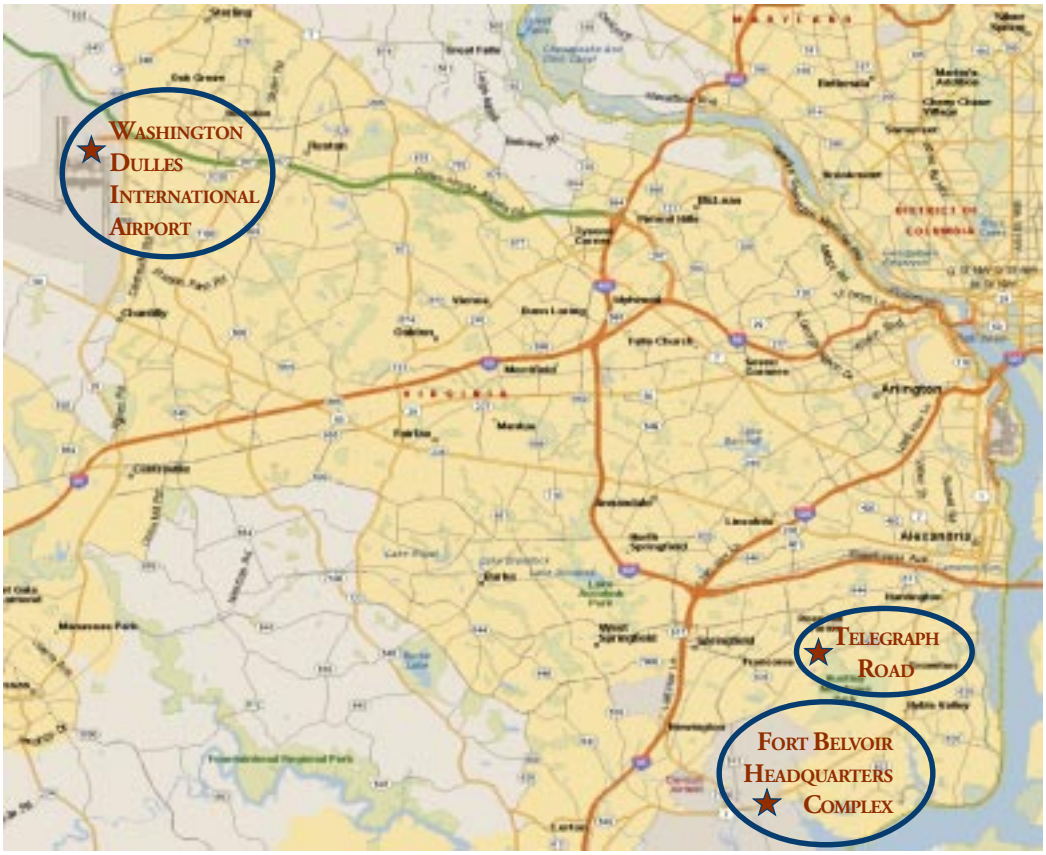
DTRA began moving to the Headquarters Complex at Fort Belvoir, Virginia in June 2000.

believed that only by bringing DTRA personnel together in one location would they be able to achieve a level of responsiveness, creativity, and entrepreneurial spirit needed to thrive in a competitive world of rapidly changing defense missions and budgets. Davis believed so strongly in the necessity for this consolidation that he set money aside in out-year budgets for the design of a new facility for DTRA. Then, he requested that Dr. Hamre include in DoD's military construction request to Congress for 2000 an appropriation for a preliminary building design of an entirely new facility for DTRA.[141]

In March 1999, Davis envisioned a new headquarters building with four floors, approximately 300,000 square feet of office space, and a price tag of about $65 million. Following site and building design, construction estimates, contracts, and actual construction, the new DTRA building could be ready for occupancy, he estimated, by mid-2003.[142] Until then, the headquarters and its directorates would remain in the leased facilities at Dulles. By October 1999, the situation had changed, senior department officials had directed that the agency headquarters would relocate in the next year to the Headquarters Complex at Fort Belvoir, Virginia. In informing all agency personnel on October 4, 1999, the director explained that not only would the agency relocate to Fort Belvoir, but it would do so quickly. The move from Dulles would start in early summer 2000, three years earlier than previously announced.[143]

The expedited schedule was possible because vacant office space already existed in the Headquarters Complex at Fort Belvoir, and another defense agency, the Defense Contracting Management Agency, would be vacating its offices in the same building by the end of December 2000. After examining the situation in the summer of 1999, David R. Oliver, Jr., Principal Deputy Under Secretary of Defense for Acquisition, Technology, and Logistics, directed DTRA to move into vacant office space in the Headquarters Complex. At the same time, Oliver said that DTRA would be authorized to contract immediately for the construction of a large, temporary 100,000 square foot modular building in an existing parking lot at the Headquarters Complex. It could serve as office space for up to 500 employees. Hamre agreed. The combination of these three developments, Davis told agency employees, would consolidate a majority of DTRA personnel at Fort Belvoir. Personnel in three directorates, Technology Development, WMD Combat Support, and Technology Security, would continue to work in the agency's other facilities in Alexandria, Virginia.

In June 2000, the movement of people, furniture, computers, and other systems to Fort Belvoir began. The move was scheduled to be completed that same month.[144] Approximately 150 people moved the week of June 13 from Dulles into six office suites located in the Headquarters Complex building. In



DETAILED AREA

By December 2000, Headquarters DTRA had been completely relocated from Washington Dulles International Airport to Fort Belvoir. Other DTRA elements remained at various sites in the National Capital Region.

late September, the director and deputy director led a second agency group into offices in the new 100,000 square foot modular building. Over the next three months, the special and personal staff offices, business directorates, and one mission directorate also moved into the building. By December 2000, Headquarters DTRA had been completely relocated from Dulles International Airport to Fort Belvoir. Only the On-Site Inspection Directorate remained at Dulles, and it was slated to move to the Headquarters Complex at Fort Belvoir when space was prepared and available.

Director's Departure and Assessment

In late October 2000, Davis wrote agency personnel, "We are now in the third year of this agency's existence and my last year as director." He announced that he would be stepping down as director in the spring of 2001. "As an agency," he continued, "we have had significant accomplishments, both in building the institution that is DTRA and in executing the missions assigned to us. The first stage of our work is done; now it is time to ignite the second stage and take the Defense Threat Reduction Agency even higher."[145]

In the same message, Davis enumerated DTRA's major accomplishments. From implementing the nation's arms control treaty commitments to carrying out the large cooperative programs which were assisting the states of the former Soviet Union in reducing their nuclear weapons, DTRA personnel had carried out the United States' responsibilities professionally. The agency had established a successful partnership with the U.S. Strategic Command in creating the first Nuclear Mission Management Plan and it had developed a good working relationship with the Department of Energy's new National Nuclear Security Administration. DTRA, Davis believed, had drafted, coordinated, and published the plan for the nation's chemical-biological defense program. Technology security, through licensing, had been made more efficient and extended into the realm of monitoring space launches of U.S. communications satellites. But Davis thought that the agency had achieved a new identity within the federal government in the area of conceptualizing, planning, and executing inter-agency counterterrorism exercises. Davis wrote that in this area, "We [DTRA] have had a greater impact than that of our legacy organizations…."[146] Finally, he singled out the JCS review of DTRA's combat support missions and the agency's establishment of liaison officers, located at the CINC's headquarters around the world, as proof of the new organization's commitment to the nation's combatant commanders and military forces.

In February 2001, Davis announced in the agency's newsletter that his appointment had been extended through June. At that time, he planned return to California and work at the Lawrence Livermore National Laboratory where he would become a national security fellow at the Center for Global Security Research.[147] In the same newsletter article he explained his view of DTRA's historical significance. "The Defense Threat Reduction Agency," he wrote, "has been described to me by several people as the most important defense management innovation since the creation of the Defense Advanced Research Projects Agency more that 50 years ago."[148] As the agency's first director, he took "considerable satisfaction" in that comparison, and then he concluded, characteristically: "You should as well."[149]

2001: New Opportunities and New Milestones

Throughout 2001, the Combat Support Directorate worked intensively with the unified combatant commands, especially the U.S. Central Command (CENTCOM), U.S. Special Operations Command (USSOCOM), and the U.S. Strategic Command (STRATCOM). Combat Support personnel provided operational support to the CINCs, military services, and other governmental agencies. They conducted integrated vulnerability assessments of Defense Department installations worldwide in direct support of the Chairman of the JCS's antiterrorism and force protection programs. They carried out independent nuclear surety inspections for the JCS. In addition, they had mission responsibility for the DTRA's Operations Center. In January, the operations center provided support for President Bush's inauguration. Since the agency was seen as the defense department's center for WMD expertise, the operations center developed a plan for supporting the Armed Forces Inaugural Committee's operations center and other key government operations centers. According to Major Robert Ivy, USA, "Our reason for working [the event] was to shorten the response timeline in support of the Secret Service. We had modeling people working here, as well as subject matter experts, so there was a full reach-back capability. DTRA is increasingly seen as the expert on weapons of mass destruction."[150]

President Bush's inauguration was the DTRA Operations Center's first opportunity to work with the scientists and technicians at the National Atmospheric Release Advisory Capability Office. Based at the Lawrence Livermore National Laboratory, this office provided federal and state officials with real-time assessments of the environmental consequences of radiological materials in the atmosphere. DTRA's Operations Center personnel also worked closely with the members of a new command, the Joint Task Force for Civil Support, who deployed to Washington D.C. for the inauguration. At the end of the long week, the chief of the operations center, Lieutenant Colonel Laura Hill, USA, concluded, "We couldn't replicate this training anywhere else."[151] Significantly, this operations center experience would be used later in the year in responding to the September 11 terrorist attack, and in preparations for the 2002 Winter Olympics to be held in Salt Lake City, Utah.

DTRA's Operations Center provided support for the inauguration of President George W. Bush by assisting the Armed Forces Inaugural Committee and other key government agencies.

In its first full year of operations, the Technology Development Directorate had the mission of developing, managing, and coordinating DTRA's research and development activities. These activities focused on enhancing and enabling the unified combatant command's WMD operations support, combat support, and threat reduction missions. In 2001, the directorate carried out complex studies, analyses, computer models, and simulations on the effects and impacts of weapons of mass destruction. The definition of what types of weapons constituted WMD included not only chemical, biological, and nuclear weapons, but also radiological and high explosive weapons.[152] High explosives had been used extensively by terrorist groups, both in the United States and abroad.

At Albuquerque, DTRA used the Divine Buffalo test series to measure the blast effects of high explosive weapons on redesigned building structures.

DTRA's center for testing the effects of high explosives was located on Kirtland Air Force Base, near Albuquerque, New Mexico. DTRA's Albuquerque Operations has several hundred people experienced in planning, preparing, and conducting weapons effects tests. One important group of tests, the Divine Buffalo series, tested new techniques for retrofitting existing buildings in order to improve their survivability against high explosive weapons.[153] The tests in this series were conducted over several years, using different designs for structural columns, different reinforcing technologies, and other means to strengthen the buildings against structural collapse. Included in the Divine Buffalo series were tests to evaluate penetration of the building and its contents. Using realistic human-shaped dummies, the tests evaluated the blast effects of high explosive weapons on trauma and other types of personal injuries. All of the test data was funneled into a database that analysts used to predict lethality and the probability of serious injury to personnel in the buildings. This important work had direct application for U.S. military and diplomatic personnel stationed abroad. They knew, first hand, the threat from terrorist groups and their high explosive weapons of terror.

Technology Development had numerous other projects which had direct application to commanders of the unified commands. In late March, Admiral Richard Mies, USN, Commander-in-Chief, STRATCOM welcomed Dr. Davis, General Bongiovi, Colonel William R. Faircloth, USA, chief of staff, DTRA, Dr. Arthur T. Hopkins, director, Technology Development Directorate, Dr. Randall S. Murch, chief of ASCO, and 20 other senior staff and program mangers,

for a day-long conference in Omaha, Nebraska.[154] According to Major Stephen Hall, USAF, who was DTRA's project officer and CINC liaison to the specified command, the purpose of this "focus day" was for the senior leaders to review some 20 different programs that the agency was executing in direct support of the strategic command. Admiral Mies complimented DTRA for its initiative, characterizing the meeting a "good opportunity" to recalibrate the senior leadership on the programs.[155] Technology Development Directorate program mangers briefed the status of 17 of the 20 agency programs reviewed. During the meeting, Admiral Mies and his staff explained STRATCOM's perspective on specific programs. Those discussions were followed with extended comments on the command's future research and development interests. According to Lieutenant Colonel Todd Hamm, USA, that exchange allowed the agency to begin a process to prioritize its future research planning to better meet the demands of the warfighters. [156] During 2000-2001, DTRA had succeeded in placing an agency CINC liaison officer, either on a permanent or temporary basis, at the headquarters of U.S. European Command (also coordinating with NATO and SHAPE), U.S. Strategic Command (also with U.S. Space Command), U.S. Joint Forces Command, U.S. Central Command (also with U.S. Special Operations Command, and U.S. Southern Command), U.S. Transportation Command, and U.S. Pacific Command.

In February 2001, the U.S. Pacific Command, DTRA, and the Air Force Test and Evaluation Center conducted the large-scale field exercise and technology demonstration, called RestOps. This exercise simulated a chemical attack at the U.S. Pacific Command's 51st Fighter Wing, based at Osan Air Base, South Korea.[157] It was a large exercise, involving more the 6,500 personnel, including 450 technical evaluators and observers. Beginning on February 11, the exercise ran 24 hours-a-day for 10 days and tested new tactics, techniques, products, and equipment especially designed to help the wing restore its fighter aircraft, munitions areas, command centers, maintenance centers, and logistics sections to combat status quickly. The comprehensive program, conceived and developed by David Harrison, of the Chemical-Biological Defense Directorate, had been identified by the Secretary of Defense as an Advanced Concept Technology Demonstration project.[158] General Bongiovi flew to South Korea, spent several days observing the complex exercise which field tested 51 separate products that detected, mitigated, and assisted the fighter wing in restoring operations. After the exercise, the general concluded, "RestOps demonstrates two of our (DTRA's) strategic goals - reducing the present threat and … reducing the impact of weapons of mass destruction."[159]

The objective of this RestOps 2001exercise and technology demonstration, according to Harrison, was to identify the direction, size, and composition of the

chemical attack and then, to identify key actions during and afterwards that would assist the wing in restoring and sustaining combat operations. Consequently, the exercise tested products that could protect people and equipment prior to the chemical attack, products that could mitigate the effects through decontamination during the attack, and products and techniques that could speed the recovery of operational tempo immediately following the attack. When the exercise concluded on February 21, DTRA program and technical mangers presented a debriefing, dubbed a "hot wash", for the wing command and staff. A more extensive report, one that evaluated all of the demonstration products and procedures, came several months later.[160]

By that time, DTRA's Chemical-Biological Defense Directorate was involved in a similar effort with the U.S. Navy. On October 12, 2000, the USS Cole was conducting a routine fueling stop in the port of Aden, Yemen. Suddenly, without warning it was attacked by terrorists who exploded a powerful bomb near the ship, killing 17 sailors, and wounding 42 others.[161] The incident demanded better force protection measures. Within weeks, U.S. Navy officials began working with DTRA's experienced analysts and project managers in Technology Development, Chemical-Biological Defense, and WMD Combat Support directorates to design and develop a new restoration of operations project, the Sea Port Protection Analysis (SPPA). Under this program, DTRA assessment teams would travel to U.S. Navy ports and weapons depots in the United States and abroad and evaluate their physical vulnerabilities to terrorist attacks using weapons of mass destruction. These DTRA assessments were provided to the local commanders, headquarters, and the senior leaders in the U.S. Navy. These assessments became the basis for analysts in the three directorates – Technology Development, Chemical-Biological Defense, and WMD Combat Support, to devise new methods to detect, mitigate, and restore naval operations if a port were attacked using weapons of mass destruction.

The year 2001 was a significant turning point in establishing the Space Launch Monitoring division's operational capability. The division reached a strength of 28 full-time monitors, organized into six teams. Each of the team members had been trained at DTRA's Defense Nuclear Weapons School in Albuquerque, and then had completed a rigorous course of certification training within the division. Their mission is to review the licenses, including extensive technical data, of U.S. corporations selling or leasing rocket-launched space vehicles or space technologies to foreign companies. Following the technical data review, agency monitors recommended licensing modifications, and supported technical interchange positions. Then, the teams traveled to the site and monitored the actual launch of the space vehicles. Typically, a team would be deployed to a launch site for 30 to 45 days. Lieutenant Colonel Robert Robertson, USAF, explained that "We

cover the program from cradle to grave. The companies used to be concerned with the lack of consistency … from one program to the next, or within the same program. Now they see the same people each time they deal with that program."[162] During fiscal years 2000 and 2001, the teams monitored 16 launches of commercial satellites in Russia, Ukraine, and the Pacific Ocean. An additional 15 overseas launches of U.S. commercial satellites were projected for 2002.

From the beginning of the Cooperative Threat Reduction program, one of its principal objectives had been to assist Russia, Belarus, Kazakhstan and Ukraine in the elimination of their START I-limited weapons, warheads, and weapon systems infrastructure. By the end of 2000, Kazakhstan had eliminated, with funding, program management, and contractor assistance from CTR, all of its 104 SS-18 ICBM silos and all of its 40 heavy bombers. With the elimination of these silos and bombers, Kazakhstan met all of its obligations under the START I treaty. Still underway in 2001, with direct CTR program assistance, were projects to eliminate the unified fill facilities in the nuclear storage areas at Sary Ozek, Chagan, and Dezhavinsk sites, and the elimination of nuclear testing infrastructure at the Deglin Mountain nuclear testing site.

Equipment provided under the CTR program assists Russia, Belarus, Kazakhstan, and Ukraine in eliminating their START I-limited weapons systems infrastructure.

Ukraine passed a major milestone in 2001. When it became a nation in 1991, Ukraine had inherited 258 ICBMs (SS-19s, SS-24s), 176 silo launchers, 36 heavy bombers (Tu-160s, Tu-22Ms), 487 air-launched cruise missiles, and 1,984 nuclear warheads. In 1994, it ratified both the START I Treaty and the Non-Proliferation Treaty, thus agreeing to become a non-nuclear nation. By December 2000, Ukraine had eliminated all of its intercontinental ballistic missiles, most of its missile silos, and almost all of its heavy bombers. CTR funds had financed the elimination of every one of these strategic offensive weapons. In February 2001, the final Tu-160 heavy bomber was destroyed at Priluki Air Base by Ukrainian firms working under a CTR contract. Previously, Ukraine's other heavy bombers had been eliminated at five military air bases: Uzin, Belaya, Tserkov, Poltava, and Nikolaev. Commenting on the significance of eliminating the final TU-160 Blackjack bomber and the first Tu-22 Backfire at Priluki, Major Donald E. Parman, USAF, the CTR program manager, said "The Ukrainians stand firm on their commitment to destroy all similar weapons and to build new peaceful relations with the west. The elimination of the first Backfire demonstrates that commitment to the world."[163] Parman spoke in February; by May all remaining heavy bombers and air launched cruise missiles had been destroyed.

For Ukraine to meet its START I obligations, it still had to destroy the last few SS-24 ICBM silos. That work had begun in 1998 and it had to be completed by December 5, 2001, the date for compliance with the START Treaty. On October 30, 2001, Ukrainian government representatives, U.S. officials, DTRA program mangers, American and Ukrainian contractors, local citizens, and approximately 150 media representatives participated in a ceremony at Pervomaysk, Ukraine. They observed the destruction of the final SS-24 silo, and the signing of an agreement that extended the US-Ukrainian cooperative threat reduction program until 2006. Signed by Colonel-General Vladmir Mikhtyuk, Ukrainian Deputy Minister of Defense, and John Connell, the U.S. government's CTR program manger for Ukraine, the agreement provided for the removal of all the weapon systems-related support and maintenance infrastructure from the Ukrainian SS-24 sites.[164]

John Connell also participated in another significant milestone, the awarding of a new multi-year, multi-billion dollar CTR Integrating Contract. Prior to the awarding of this significant contract, each new CTR project took six to twelve months to complete using the U.S. government's procurement process. In 2000, Ann Bridges Steely, director of the Acquisition Management Directorate, recommended developing a new large-scale integrating contract that would be in-place when new CTR requirements arose. Using this type of contract, the CTR procurement process for new projects could be speeded up to approximately 55 to 80 days. The director and deputy director approved the new acquisition strategy and in November 2000, Connell and Herbert A. Tompson formed a CTR-Acquisition Management team to oversee the process of soliciting, informing, evaluating, and selecting contractors for the largest single contract in the agency's history. Following initial advertising in November, the team held an information day for prospective industry representatives and contractors in February 2001. By April, 72 bids had been solicited. For the next three months, Connell and Thompson led the source selection process. They followed established procedures of establishing separate panels to evaluate the technical merits, the performance reviews, and cost issues. When the source selection process and decision reviews were completed in late autumn, DTRA made the announcement of the CTR integrating contract award on September 7, 2001. Five major U.S. firms received the $5 billion, five-year contract, with provision for a five-year extension if the initial work had been preformed well.[165]

The United States reached three major arms control milestones during 2001: shutdown of the chemical munitions elimination facility at Johnson Atoll, completion of on-site inspections under the INF Treaty, and fulfillment of the START I treaty's deadline for strategic offensive arms eliminations. In the first milestone, DTRA personnel escorted a team of international arms control

inspectors who monitored the destruction of the last of 13,000 land mines filled with chemical munitions at the Johnston Atoll Chemical Agent Disposal System (JACADS) in November 2000. These land mines were part of a larger cache of more than 400,000 rockets, projectiles, bombs, mortars, and one-ton munitions containers that had been destroyed, starting in 1993, on Johnson Island. When the Chemical Weapons Convention entered into force in April 1997, international inspectors had the right to travel to Johnston Atoll and inspect the chemical destruction facility. Escorts from DTRA's On-Site Inspection Directorate accompanied each of the inspection teams to the island. Lieutenant Colonel Walter H. Kamien, USAF, served as escort team chief during the final destruction. "We have been planning this last destruction for a long time," he explained. "We ensured that we had procedures in place with the inspection on-site staff to witness this last destruction and to verify that there were no other mines on the island." [166] Although the final land mines were destroyed in November 2000, there were a number of subsequent shutdown activities in January and February 2001. This work was subject to review by the CWC inspectors, who were escorted by agency personnel. When the facility shutdown was completed, the Johnston Island facility became the United States' first chemical demilitarization plant to be officially closed.

On May 31, 2001, the INF Treaty reached a milestone with the end of the 13-year period for conducting on-site inspections. Beginning on June 1, 1988, the United States and Soviet Union/Russia had the right under the treaty to send 10-person teams to inspect declared military sites. This treaty "right" existed for 13 years, ending in May 2001. During those years, the United States sent 540 teams (5,400 inspectors) to USSR/Russian sites; while USSR/Russia deployed 311 inspection teams (3,110 inspectors) to United States' INF Treaty sites.[167] In addition, each nation had a treaty right to send an inspection team of up to 30 people to continuously monitor the exits and entrances of one INF missile assembly or rocket motor production factory. The American inspectors went to the Soviet INF missile assembly plant in Votkinsk, while the Soviet/Russian inspectors conducted their continuous portal monitoring inspections at an INF rocket motor plant in Magna, Utah. Without a doubt, the end of inspections under the INF Treaty was a significant historical event for both nations.

In 2001, American and Russian inspectors conducted a series of commemorative events marking the completion of the on-site inspection phase of the INF Treaty.

Consequently, the leaders of DTRA's On-Site Inspection Directorate worked with their Russian counterparts to plan and conduct a series of major commemorative events in Moscow, Votkinsk, Washington, and Magna. Attended by senior diplomats, defense officials, military officers, current and retired inspectors, and the media, these events held in May 2001 recognized the treaty's historical significance in laying the foundation for a new era in U.S.-Russian relations.[168]

The third treaty milestone in 2001related to the START I treaty. Signed in 1991, the treaty entered into force on December 5, 1994 following ratification by the five signatory nations - United States, Russia, Belarus, Ukraine, and Kazakhstan. Seven years after entry into force, all parties to the treaty had to declare that their arsenals of strategic offensive arms was below the level of 1,600 strategic weapons and 6,000 warheads. In fact, during the ratification process three nations - Belarus, Ukraine, and Kazakhstan, pledged to eliminate all of their strategic offensive arms and accede to the United Nation's Non-Proliferation treaty. As the December 2001 deadline approached, two nations, Ukraine and the United States, had not reported data confirming they were below their declared treaty limits. As noted above, Ukraine eliminated its final SS-24 silo on October 30, 2001, thus achieving treaty compliance. On December 5, Secretary of State Colin L. Powell declared that the United States had met its final limits under the START treaty.[169] Powell characterized the event as an "important milestone" in dismantling the legacy of the Cold War. In Moscow, Aleksandr Yakovenko of the Russian Foreign Ministry issued a short statement: "Russia had completely fulfilled its commitments under the Strategic Arms Reduction Treaty, START I."[170] In fact, as of the deadline all parties to the treaty had superceded their treaty-mandated limits in weapons and warheads. This milestone did not mean the end of the treaty, the end of reductions, or the end of on-site inspections. All provisions of the START I treaty continued as the nations prepared significant reductions of their strategic offensive arms in future years.

The agency's principle office for analyzing emerging WMD threats, developing advanced concepts, and recommending appropriate technologies was the Advanced Systems and Concepts Office. From its inception in 1998, Dr. Davis wanted this office to lead the intellectual debate on WMD issues within the Department of Defense, and possibly within the federal government.[171] Leading the scientific and technical debate, Dr. Hamre had insisted, was especially crucial in the areas of biological and chemical threat reduction.[172] Within the agency, Davis wanted ASCO's analysts to serve as the "honest brokers" on DTRA's policy, operational, and research and development issues. Further, the office had specific responsibilities to provide support and advice to the agency's senior advisory group, the Threat Reduction Advisory Committee. During 2000, the new ASCO

office expanded from 9 to 25 personnel under the direction of Dr. Murch. The following year, it grew to 33 scientists, analysts, and support staff, with Dr. Charles R. Gallaway assuming leadership in June 2001.[173]

In carrying out its work, ASCO followed the model of a strategic "think tank" or institute. It collected ideas and recommendations for WMD analytical projects from OSD agencies and offices, the Joint Staff, combatant commands, military services, and other federal agencies and departments. TRAC members also recommended study topics. DTRA directorates, especially combat support, technology development, and chemical-bio defense, submitted ideas for new analytical projects. Within ASCO, all of these ideas, proposals, and recommendations were analyzed using a metric evaluation process. Once a project was defined, the study was conducted by a team drawn from ASCO, agency directorates, outside contractors, and other government organizations. When completed, the team presented their study, findings, and recommendations to the customer in the user community. The objective was to produce focused studies that could be applied directly to the needs of the commands, military services, agencies, offices, and directorates. In 2001, ASCO published major studies that examined the Comprehensive Test Ban Treaty (classified), Naval Seaport of Debarkation, Amphibious Operations and BW/CW Threats (classified), and Nuclear Proliferation, Nuclear Deterrence, and Nuclear Preventive Threat Reduction.[174]

In addition, ASCO organized and conducted a series of workshops that examined a single issue by asking and answering analytical questions of experienced scientists, physicians, senior military officers, and technologists. In December 2000, Dr. Davis and Dr. Murch sponsored a major interdisciplinary workshop on, "Human Behavior and WMD Crisis/Risk Communications."[175] It explored the relationship in a WMD crisis between the public's trust in its government, and the government's ability to provide the public with accurate, concise information through the media. Another workshop, organized by Dr. Peter B. Merkle, ASCO's scientific advisor, examined "Chemical-Biological Modeling and Simulation Future 'Desirements' ".[176] In this two-day workshop, technical experts and government leaders examined collectively the contemporary status of chemical-biological models and simulations and prospects for the future. Other analytical methods used by ASCO-led analysts were assessment studies, capabilities studies, operational assessments, and detailed, realistic, consequential scenarios of WMD events. In Davis' opinion, these ASCO studies, workshops, assessments, and scenarios fulfilled one of the Secretary of Defense' reasons for establishing the new agency: to understand better "how" to deal with the new and emerging WMD threats.[177]

From 2000 to 2001 the Threat Reduction Advisory Committee met in a plenary session three times to consider the findings of its five ad hoc panels: nuclear deterrence sustainment, biological defense, science and technology, integration, and intelligence. General Welch continued to serve as chairman. The advisory committee's 25 members represented some of the United States' leading scientists, engineers, military scholars, nuclear experts, national security policy analysts, and threat reduction experts. During the year, they worked in an advisory capacity on specific analytical problems in one of the five ad hoc panels. According to its federal charter, the purpose of the TRAC was to provide timely scientific, technical, and policy-related advice on specific issues relating to weapons of mass destruction to the secretary of defense, deputy secretary of defense, under secretary of defense for acquisition, technology, and logistics, and the director of the agency.

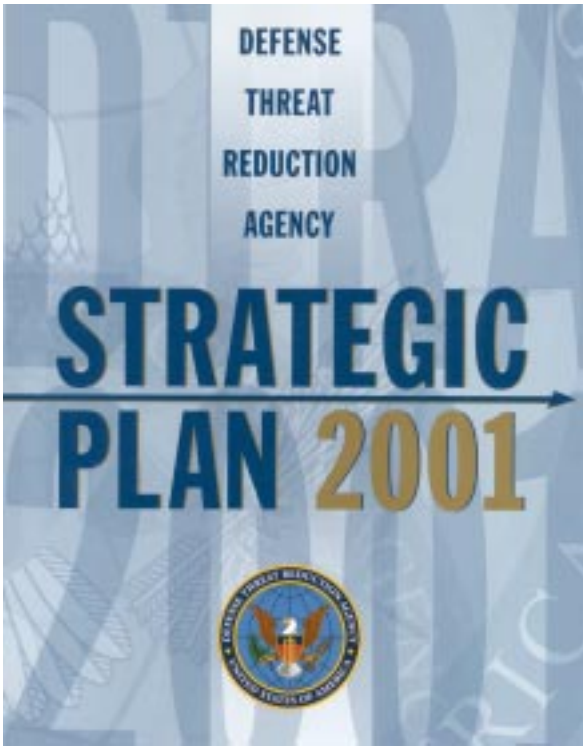
When the TRAC met in plenary sessions, the committee members discussed the findings of the ad hoc panels and then developed a consensus on its recommendations to senior DoD officials. In 2000 and 2001, DTRA's director requested that the Science and Technology panel conduct a senior-level review of the agency's research and development programs. In another effort, the TRAC completed in June 2001a joint study with the Defense Science Board, entitled "Biological Defense." TRAC also addressed the reorganization of the DoD biological defense program at the request of the deputy secretary of defense.[178]

Strategic Plan 2001

In January 2001, the director, deputy director, senior agency managers, and staff office leaders participated in a three-day off-site conference. Dr. Davis wanted the participants to work on two issues: a process to select specific tasks for inclusion in the agency's new strategic plan 2001, and an assessment of how the agency was being led in the estimation of its customers and employees.[179] General Bongiovi and Colonel Faircloth led the effort that shaped the new strategic plan. Bongiovi insisted that it be expanded from previous plans to provide strategic guidance for the next five years, until 2006. He advocated making several major changes, including spelling out DTRA's four mission essential functions - combat support, technology development, threat control, and threat reduction, and identifying explicitly its four mission enabling functions - resource management, business management, knowledge management, and security and intelligence management. Further, he wanted to identify DTRA's long term goals, objectives and shaping tasks. Bongiovi insisted that the new plan be linked to DoD guidance and strategic plans as well as the agency's performance goals. Bongiovi crafted

the new mission statement, explicitly listing chemical, biological, radiological, nuclear, and high explosives a WMD threats faced by the United States.

When published in March, DTRA's Strategic Plan 2001 incorporated all of these concepts, as well as a new section on enabling the agency's people through participation in education, training, and leadership development programs.[180] The published strategic plan was distributed throughout the Department of Defense and given to every employee. At the time, Dr. Davis explained, "This document is the agency's most important statement to both DTRA's staff and our external constituencies. It was a success last year; it is more so this year."[181]



DTRA Strategic Plan 2001 represents a five year projection for the agency.

Leadership and Organizational Changes

When Dr. Davis left in June 2001, Major General Bongiovi became the acting director. No sooner had the director departed than the agency was threatened with dismemberment. On July 16, 2001, General Bongiovi sent an e-mail to all personnel stating that the deputy secretary of defense was considering separating the Technology Security Directorate from the agency, and reestablishing the Defense Technology Security Administration. Key senators and representatives supported the move. "I expect it to be approved," the general concluded.[182] At the same time, he reported that the DoD Comptroller had established a task force to consider transferring "non-traditional" defense programs, like cooperative threat reduction, out of the department to other federal departments. While the general did not anticipate "anything" to come out of the comptroller's effort, he admitted that it was alarming.[183] Subsequently, in a July 30 e-mail, the acting director explained that while he still believed the Technology Security Directorate would be severed, he thought that the CTR program would remain with the agency.[184]

For DTRA's senior management, most of the summer of 2001 was concerned with planning, coordinating, and preparing for another major reorganization. Once again, General Bongiovi led the effort. In many ways, this restructuring was an extension of the organizational concepts which drove the major

reorganization of August 2000.[185] Then, Bongiovi had presented the agency's Board of Advisors a detailed plan to reorganize the mission essential functions (the mission directorates) and the mission enabling functions (the business offices). When the director and board agreed with the general's recommendations, the major reorganization was announced to the employees on September 26, 2000. There were many small, specialized staff offices that were not part of this earlier reorganization. Then, in June 2001 Dr. Davis asked Ann Bridges Steely, director of Acquisition Management, to lead a small team that would examine how best to incorporate the specialized staff offices into the agency's enabling directorates.[186] The team was given three objectives: reduce the span of control, improve efficiency, and make better use of the agency's senior executives. The results, briefed to the acting director and board of advisors in late July, was to establish a single business organization, led by a Senior Executive Service manger who would be responsible for all enabling functions. This recommendation was not followed; instead the acting director and board set up another small team to redefine and expand the four existing enabling directorates by incorporating a number of special staff offices and functions. The team would also identify specific reengineering initiatives and any projected savings.[187]

On August 31, 2001, General Bongiovi announced the reorganization to all employees. Effective October 1, eight staff offices would be abolished and incorporated into the directorates of Resource Management, Acquisition and

Directorates 2000	Directorates 2001
Chemical-Biological Defense	Chemical-Biological
Cooperative Threat Reduction	Cooperative Threat
Combat Support	Combat Support
On-Site Inspection	On-Site Inspection
Technology Security	Technology Security
Technology Development	Technology Development
Acquisition Management	Acquisition & Logistics
Resource Management	Resource Management
	Information Management
	Security & Counterintelligence

Logistics, Information Management, and Security and Counterintelligence. Also, the Albuquerque Operations staff would be realigned. The Director's Action Group was disestablished, and a new Director's Staff group set up to assist the director in strategic management. Finally, the general said that he was directing the leaders of the four enabling directorates to report to DTRA's senior leadership by February 1, 2002, on the efficiencies, enhanced performance, and resource savings gained by the new alignment.[188]

The same day, August 31, 2001, Dr. Paul Wolfowitz, deputy secretary of defense, signed a memorandum reestablishing the Defense Technology Security Administration.[189] It was reconstituted and placed into the Department of Defense's Office of the Under Secretary for Policy. Wolfowitz selected Lisa Bronson, the Deputy Under Secretary of Defense for Technology Security Policy and Counter-Proliferation to serve concurrently as the Director, DTSA.[190] Subsequently, E. C. "Pete" Aldridge, Jr., Under Secretary for Acquisition, Technology, and Logistics, instructed DTRA's director to retain in the agency those functions and people that involved reviewing military critical technologies and space launch monitoring activities.[191] By the end of the year, these personnel, functional, and organization issues remained unresolved.

The following day, September 1, Dr. Stephen M. Younger became the second director of the Defense Threat Reduction Agency.[192] A theoretical physicist, educated at Catholic University and the University of Maryland, he had worked for the past decade at the Los Alamos National Laboratory. [193] As the senior associate laboratory director, he was responsible for assuring the safety, reliability, and performance of the majority of the weapons and materials in the nation's nuclear arsenal. The directorate had more than 3,000 people and a annual budget of $1 billion. At Los Alamos, Younger had founded and directed the Center for International Security Affairs which had developed the first Department of Energy laboratory-to-laboratory cooperation program with nuclear weapons institutes in the Russian Federation. Three days after he arrived in Washington, the new director addressed DTRA's annual conference, "The Evolution of Threat Reduction." Younger spoke to more than 400 people at the opening session, outlining the agency's mission and responsibilities. He declared that "we need to develop new means of detection, new means of protection, and new means of defense against nuclear, chemical, and biological threats."[194] No one knew it at the time, but the director's call for new "means" of defense took on added significance just than ten days later.

Dr. Stephen M. Younger, second director of DTRA

September 11, 2001: Terrorists Attack the United States

When terrorists hijacked four commercial airliners on September 11, 2001 and flew them into the World Trade Center, Pentagon, and a Pennsylvania field, they killed more than 3,000 innocent people. After that September morning, the United States had to acknowledge that it faced a new, larger, and more serious threat from terrorism than previously known. Then, just two weeks later, terrorist attack sent deadly anthrax spores enclosed in ordinary postal letters to citizens and public officials. These anthrax-laced latter unleashed the specter of bioterrorism across the United States. These two events forced everyone – the President, Congress, federal, state, and local officials and the public – to face the new reality: the United States was now vulnerable to terrorists attacking its citizens, cities, and institutions with weapons of mass destruction.

At the Defense Threat Reduction Agency, the new reality accelerated the efforts of the people, programs, and projects working directly on the mission of WMD threat reduction. Whether they worked on nonproliferation or counterproliferation missions, all DTRA people had to acknowledge that terrorists might attack the United States using chemical, biological, radiological, nuclear, or high explosive weapons. Mass casualties, including deaths, could be great. Consequently, there was a new urgency to carrying out the agency's mission: safeguarding the nation from WMD, reducing the present threat, and preparing for the future threat.

Yet, at DTRA everyone knew that their past efforts were only prologue; the future would demand even more from one of the Department of Defense's youngest agencies….

DTRA Reference Materials

by Captain Robert J. Bennett, U.S. Army

DTRA Key Personnel
(October 1, 1998 through December 31, 2001)

Director

Dr. Stephen M. Younger	September 1, 2001–
Maj. Gen. Robert P. Bongiovi, USAF (Acting Director)	June 25, 2001 – August 31, 2001
Dr. Jay C. Davis	October 1, 1998 – June 24, 2001

Deputy Director

Maj. Gen. Robert P. Bongiovi, USAF	June 1, 2000 –
Maj. Gen. William F. Moore, USAF	October 1, 1998 – May 31, 2000

Chief of Staff

Mr. William R. Faircloth	December 17, 2001 -
Col. William R. Faircloth, USA	May 13, 2000 – December 16, 2001
Capt. Richard L. Towner, USN	February 1, 1999 – May 12, 2000
Col. Arthur T. Hopkins, USAF	October 1, 1998 – January 31, 1999

Senior Enlisted Advisor

Chief Master Sgt. Lewis L. O'Bryant, USAF	September 1, 2000 –
Sgt. Maj. Steve Crawford, USA	October 1, 1999 – August 31, 2000
Sgt. Maj. Clinton Adams, USA	October 1, 1998 – September 30, 1999

Chairman, Threat Reduction Advisory Committee

The Threat Reduction Advisory Committee (TRAC) is a panel of distinguished experts commissioned with providing advice and Weapons of Mass Destruction (WMD) defense initiatives to senior DoD officials including the DTRA director. The panel reports to the Assistant Secretary of Defense for Acquisition, Technology and Logistics. DTRA provides logistical support to TRAC meetings and implements the initiatives developed by the committee.

Gen. Larry D. Welch, USAF (Ret.)	October 1, 1998 –

Director, Advanced Systems and Concepts Office

The Advanced Systems and Concepts Office (ASCO) is a small group of scientists and military experts who work closely with the TRAC and senior DTRA leadership. ASCO is responsible for developing and maintaining an evolving analytical vision of necessary and sufficient capabilities to protect U.S. and allied forces and citizens from nuclear, chemical and biological attack. ASCO also identifies gaps in these capabilities and initiates programs to fill them.

Dr. Charles R. Gallaway	June 1, 2001 –
Dr. Randall S. Murch	December 1, 1999 – May 31, 2001
Dr. Victor Utgoff	November 1, 1998 – November 30, 1999

Senior Advisor, Department of Energy

Mr. Michael O'Connell	October 1, 1998 – September 30, 2000

Senior Advisor, Department of State

Dr. Edward M. Ifft	October 1, 1998 –

Senior Advisor, Federal Bureau of Investigation

Mr. Perry Smith	October 1, 1998 – August 10, 2001

Senior Advisor, Science and Technology

Dr. Starnes Walker	January 3, 2000 –

Director, Chemical-Biological Defense Directorate

The Chemical-Biological Defense Directorate was formed from elements of the Office of the Assistant Secretary of Defense, Nuclear, Chemical and Biological Defense Programs (OASD(NCB)). Its mission is to oversee a coordinated, jointly integrated and internationally recognized chemical and biological defense program.

Col. Craig A. Walling, USA (Acting Director)	October 13, 2001 –
Dr. I. Gary Resnick	March 24, 2000 – October 12, 2001
Mr. Carmen J. Spencer	December 1, 1998 – March 23, 2000
Col. Edwin P. McDermott, USAF	October 1, 1998 – November 30, 1998

Director, On-Site Inspection Directorate

The On-Site Inspection Directorate was formed from elements of the On-Site Inspection Agency and retained the missions of that agency. These missions include conducting U.S. government inspections of foreign facilities, units or events under arms control treaties, coordinating and escorting foreign inspections of U.S. facilities, units or events under arms control treaties, and planning and preparing for arms control treaties under negotiation.

Maj. Gen. Michael S. Kudlacz, USAF	November 15, 2000 –
Mr. Douglas M. Englund (Acting Director)	July 1, 2000 – November 14, 2000
Rear Adm. Jacqueline O. Barnes, USN	October 1, 1998 – June 30, 2000

Director, Technology Development Directorate

(Counterproliferation Support and Operations Directorate, October 1998 – September 2000)

The Technology Development Directorate was formed in October 1998 by combining the Defense Special Weapons Agency's (DSWA) Electronics and Systems Directorate, the DSWA Weapons Effectiveness Directorate, two DSWA program offices, and the Test Directorate of the DSWA Field Command (Albuquerque). The directorate's mission was to create capabilities to support commanders-in-chiefs (CINCs) for WMD facility targeting and consequence management, to maintain DoD skills and capabilities for nuclear effects testing, and to develop specialized ordnance. In February 1999, the directorate added the personnel and missions from DTRA's Force Protection Directorate and the Counterproliferation Directorate; this new organization was named the Counterproliferation Support and Operations Directorate. In September 2000, the directorate added elements from DTRA's On-Site Inspection Directorate and Nuclear Support and Operations Directorate. Simultaneously, it transferred its operational elements to the newly formed WMD Combat Support Directorate. The Technology Development Directorate develops, manages, and coordinates research and development activities to enhance and enable WMD operations support, combat support, and threat reduction.

Dr. Arthur T. Hopkins	September 16, 2000 –
Col. Arthur T. Hopkins, USAF	February 1, 1999 – September 15, 2000
Dr. George W. Ullrich	October 1, 1998 – February 1, 1999

Director, Technology Security Directorate

The Technology Security Directorate was formed exclusively from the Defense Technology Security Administration. Its mission is to develop and implement DoD policies on international transfers for defense-related goods, services, and technologies and to ensure that transfers are consistent with U.S. national security interests.

Ms. Lisa Bronson	September 23, 2001 –
Mr. David S. Tarbell	October 1, 1998 – September 22, 2001

Director, Cooperative Threat Reduction Directorate

The Cooperative Threat Reduction Directorate was formed from elements of DSWA's Cooperative Threat Reduction Execution program office and Cooperative Threat Reduction policy planners from OASD(NCB). The mission of the directorate is to serve as the executive agent for the congressionally-mandated Nunn-Lugar Program, which supports the destruction and dismantlement of nuclear, chemical, and biological weapons in states of the former Soviet Union.

Brig. Gen. Thomas E. Kuenning, Jr., USAF (Ret.)	October 1, 1998 –

Director, Weapons of Mass Destruction Combat Support Directorate

(Nuclear Support and Operations Directorate, October 1999 – September 2000)

The Weapons of Mass Destruction Combat Support Directorate was originally formed from elements of DSWA's Operations (Stockpile) Directorate, elements of DSWA's Field Command (Albuquerque), and individuals from OASD(NCB). The directorate maintained this organization initially as the Nuclear Support Directorate and subsequently as the Nuclear Support and Operations Directorate until September 2000. In September 2000, the directorate added elements from DTRA's Counterproliferation Support and Operations Directorate, transferred elements to the newly formed Technology Development Directorate, and took on its current identity. The directorate provides combat support to the Joint Chiefs of Staff, the Joint Staff, the CINCs, and the military services to engage the WMD threat posed to the United States, its forces, and allies by WMD. The directorate also supports the essential WMD response capabilities, functions, activities, and tasks necessary to sustain all elements of forces in theater at all levels of war.

Brig. Gen. Richard J. Casey, USAF	December 12, 2001 –
Brig. Gen. Robert P. Summers, USAF	January 1, 1999 – December 11, 2001
Brig. Gen. Thomas F. Gioconda, USAF	October 1, 1998 – December 31, 1999

Director, Acquisition and Logistics Directorate

(Acquisition Management Directorate, September 2000 – October 2001)

The Acquisition and Logistics Directorate was formed on October 1, 2001, by combining the functions of the Acquisition Management Directorate with the Logistics Division and selected elements of the Albuquerque Operations. The mission of the Acquisition and Logistics Directorate is to provide policy, management, and execution, for all contracts and logistics supporting the agency and its mission directorates.

Ms. Ann Bridges Steely — September 26, 2000 –

Director, Resource Management Directorate

The Resource Management Directorate was formed on September 26, 2000, by combining two offices, Manpower and Personnel and Financial Management, which had formerly reported through the chief of staff to the director. On October 1, 2001, the directorate expanded incorporating the Health and Safety Office, Quality Management Office, and selected elements of the Albuquerque Operations. The mission of the Resource Management Directorate is to manage fiscal and human resources in support of the agency's mission.

Mr. Myron K. Kunka — September 26, 2000 –

Director, Security and Counterintelligence Directorate

The Security and Counterintelligence Directorate was formed on October 1, 2001, by combining the functions of the Security Office and the Counterintelligence Office. The mission is to provide timely security and counterintelligence support and services that protect the agency's people, information, and facilities.

Mr. James E. Wright, Jr. — October 1, 2001 –

Director, Information Management Directorate

(Information Systems Directorate, September 2000 - October 2001)

The Information Management Directorate was formed on October 1, 2001 by combining the functions of the Information Systems Directorate with the Public Affairs Office, Administrative Office, and elements of the Albuquerque Operations. The directorate's mission is to prepare an information technology strategic plan, manage administrative and corporate communications, and maintain the agency's information operating systems.

Mr. Iftikhar Jamil (Acting Director) — August 30, 2001 –

Mr. Mario G. Vizcarra (Acting Director) — May 21, 2001 – August 29, 2001

Dr. Michael M. McGreer — September 26, 2000 – May 20, 2001

Former Directorates

Force Protection Directorate

(October 1998 – February 1999)

The Force Protection Directorate was formed exclusively from the Force Protection program office of the Defense Special Weapons Agency (DSWA) Programs Directorate. It was responsible for performing Joint Staff Integrated Vulnerability Assessments for DoD forces, installations, and agencies. In February 1999, the directorate, its mission, and personnel were absorbed into the Counterproliferation Support and Operations Directorate.

Col. Richard T. Kingman, USAF October 1, 1998 – February 1, 1999

Counterproliferation Directorate

(October 1998 – February 1999)

The Counterproliferation Directorate was formed by elements from DSWA's Counterproliferation Directorate and parts of the Office of the Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense (OASD(NCB)). Under DTRA, it became the Counterproliferation Directorate. The directorate's mission was to oversee the DoD counterproliferation program, develop and demonstrate counterforce capabilities, and provide operational capabilities to warfighters. In February 1999, the directorate was disbanded and its personnel and missions were transferred to the Counterproliferation Support and Operations Directorate.

Mr. Vayl S. Oxford October 1, 1998 – February 1, 1999

DTRA Operating Locations October 1, 2001

Headquarters, DTRA	Fort Belvoir, Virginia
Acquisition and Logistics Directorate	Fort Belvoir, Virginia
Cooperative Threat Reduction Directorate	Fort Belvoir, Virginia
Information Management Directorate	Fort Belvoir, Virginia
Resource Management Directorate	Fort Belvoir, Virginia
Security and Counterintelligence Directorate	Fort Belvoir, Virginia
On-Site Inspection Directorate	Dulles International Airport, Virginia
Chemical-Biological Defense Directorate	Alexandria, Virginia
Technology Development Directorate	Alexandria, Virginia
Technology Security Directorate	Alexandria, Virginia
WMD Combat Support Directorate	Alexandria, Virginia
Albuquerque Operations	Kirtland Air Force Base, Albuquerque, New Mexico
Defense Threat Reduction Office – Moscow	Moscow, Russia
Defense Threat Reduction Office – Kiev	Kiev, Ukraine
Defense Threat Reduction Office – Almaty	Almaty, Kazakhstan
European Operations Division	Rhein-Main Air Base, Frankfurt, Germany
START/Nuclear Division Detachment – San Francisco	Travis Air Force Base, San Francisco, California
START/Nuclear Division Detachment – Japan	Yakota Air Base, Tokyo, Japan
START/ Nuclear Division Detachment – Magna	Magna, Utah
CWC/Chemical Division Detachment – Tooele	Tooele, Utah

DTRA Locations in 2001

Chronology

1997

November 7 Secretary of Defense William S. Cohen releases the Defense Reform Initiative (DRI), proposing the consolidation of three existing Office of the Secretary of Defense (OSD) agencies into a new "Threat Reduction and Treaty Compliance Agency" in the Defense Reform Initiative Report.

1998

May 8 Deputy Secretary of Defense John J. Hamre selects Dr. Jay C. Davis of Lawrence Livermore National Laboratory as first Director, DTRA.

May 22 President William J. Clinton signs Presidential Decision Directives 62 and 63, which expand the role of the Department of Defense in WMD consequence management operations. DTRA is assigned selected tasks to accomplish missions delineated in these directives.

June 11 Deputy Secretary of Defense Hamre discusses organization and missions of soon-to-be-formed Defense Threat Reduction Agency in a speech at the DSWA Conference on Controlling Arms in Philadelphia, Pennsylvania. This is the first public mentioning of the agency's name.

July 15 Threat Reduction Advisory Council established by Deputy Secretary of Defense Hamre.

August 25-28 Dr. Davis hosts off-site meeting for agency leaders to develop agency leadership team and to define DTRA's mission, vision, and values.

October 1 DTRA established in ceremony at agency headquarters at Washington Dulles International Airport, Dulles, Virginia.

December DTRA deploys Open Skies OC-135B in support of humanitarian operations in Honduras following Hurricane Mitch. The aircraft is used to map mud flows and assists local officials in efforts to target relief to affected areas.

December 16-21 DTRA modeling and simulation teams support U.S. forces during Operation Desert Fox, a series of air raids against Iraq.

1999

January Ethnic tensions in Kosovo between ethnic Albanians and Serbs result in deployment of diplomatic observers sponsored by the Organization for Security and Cooperation in Europe. DTRA deploys inspection teams to support the United States Kosovo Diplomatic Observer Mission.

January 14 DTRA moves START/Nuclear Division Detachment – San Francisco into new office space on Travis Air Force Base, California.

February 1 DTRA reorganizes. The Force Protection, Special Weapons and Counterproliferation directorates are combined to form the Counterproliferation Support and Operations Directorate under the leadership of Colonel Arthur T. Hopkins, USAF.

February 26 DTRA completes a Cooperative Threat Reduction program initiative in Ukraine, destroying the last of 130 SS-19 missile silos.

March 25-June 20 Operation Allied Force, NATO's air campaign against Yugoslavia, takes place. DTRA provides input to European Command and Pentagon target lists.

April 1 Dr. Davis releases the DTRA Six-Month Status Report. This report includes first mention of agency consolidation at Fort Belvoir, Virginia.

April 23-25 NATO hold its 50th Anniversary Summit in Washington, D.C., and DTRA provides summit staff with modeling and simulation support for potential crisis response or consequence management.

May DTRA receives the "Hammer Award" from Vice President Albert Gore's Reinvention of Government Program.

October 1 DTRA's Technology Security Directorate establishes the Space Launch Monitoring division to monitor the launch of U.S.-owned satellites on foreign boosters.

October 1 U.S. Atlantic Command (later U.S. Joint Forces Command) establishes the Joint Task Force – Civil Support (JTF-CS). The JTF-CS is the headquarters responsible for planning and executing military assistance to civil authorities within the United States and its possessions in the event of a crisis.

November Russia opens the Nuclear Weapons Security Assessment and Training Center at Sergiev Posad, Russia. The facility enables Russia to better protect its strategic assets and is completed with CTR funding and support.

December 31 DTRA participates in DoD contingency consequence management planning for the national millennium celebration, 2000.

2000

January 27 Secretary Cohen announces consolidation of DTRA at Fort Belvoir.

February 1 DTRA and the Arnold Engineering Developing Center at Arnold Air Force Base, Tennessee, open the Decade Radiation Test Facility (DRTF). The facility provides data on how a nuclear explosion in outer space would affect sensitive optical and electronic equipment.

February 3 Deputy Under Secretary of Defense for Advanced Technology Joseph J. Eash III, tasks DTRA to conduct an Advanced Concept Technology Demonstration entitled Restoration of Operations (RestOps). RestOps is a large-scale program designed to better prepare military sites from a chemical or biological attack.

March 2 The Ukrainian Rada votes to approve the Treaty on Open Skies.

March 6 Dr. Davis publishes the agency's Strategic Plan 2000, which provides the strategic vision and direction for the agency.

March 6 Secretary Cohen awards DTRA Joint Meritorious Unit Award for the period October 1, 1998 to March 5, 2000.

May 15-25 DTRA participates in exercise TOPOFF 2000, a large-scale congressionally-mandated domestic counterterrorism response exercise designed to test national leaders' capability to respond to a domestic WMD incident.

June 1 DTRA activates consolidated operations center at Telegraph Road facility, Alexandria, Virginia.

July 5 DTRA turns over a Central CW Destruction Analytical Laboratory in Moscow to the Russian Ministry of Defense.

June 15 The first 150 DTRA employees, including the Chemical-Biological Defense Directorate and Manpower and Personnel offices, move into the Headquarters Complex at Fort Belvoir.

July 29 In Kazakhstan, DTRA closes Deglen Mountain, once the world's largest nuclear test site. The closure removed Kazakhstan from the list of nations capable of testing and launching nuclear weapons.

August 14-18 DTRA conducts exercise DINGO DAWN at Bangor Sub Base, Silverdale, Washington. The interagency nuclear weapons accident exercise attracts over 500 participants from national, state, and local agencies.

September 26 DTRA reorganizes. The Nuclear Support and Operations Directorate becomes the WMD Combat Support Directorate, the Counterproliferation Support and Operations

Directorate becomes the Technology Development Directorate, and three new directorates are formed: Resource Management, Information Systems and Acquisition Management.

September 27 DTRA headquarters moves into a modular structure on the Headquarters Complex grounds at Fort Belvoir.

2001

February 2 The final Soviet Blackjack bomber (Tu-160) is eliminated at Priluki Air Base, Ukraine.

February 11-21 DTRA participates in the Restoration of Operations (RestOps) Exercise in South Korea. More than 6,700 U.S. Air Force, South Korean Air Force, and DTRA personnel are involved in the 10-day exercise.

April 18 The Russian Duma ratifies the Open Skies Treaty. Belarus follows, ratifying on May 3. Both Russia and Belarus deposit their instruments of ratification on November 2, 2001, clearing the way for entry into force in January 2002, almost 10 years after it was signed.

May 31 The on-site inspection protocols of the Intermediate Nuclear Forces Treaty cease, 13 years after they began. During May, ceremonies are held at Washington, D.C., Magna, Utah, and Votkinsk, Russia.

June 24 Dr. Jay C. Davis ends his tenure as DTRA's first director. Deputy Director Major General Robert P. Bongiovi becomes the acting director the following day.

September 1 Dr. Stephen M. Younger becomes the second director of DTRA. Dr. Younger was a senior associate laboratory director at the Los Alamos National Laboratory.

September 7 A $5 billion CTR Integrating Contract is awarded to five major U.S. firms. It is the largest contract award in DTRA's history.

September 11 The United States is stunned by a series of terrorists attacks in Washington, D.C., New York, and Pennsylvania. DTRA contributes directly to U.S. combat commands fighting the war on international terrorism.

October 1 DTRA undergoes an agency-wide reorganization. The most notable of the changes had eight staff offices being absorbed into four new enabling directorates.

December 5 Secretary of State Colin Powell announces that the United States had met its final limits outlined in the START Treaty. All five signatory nations—the United States, Russia, Belarus, Kazakhstan, and Ukraine—were in compliance with the treaty.

Lineage & Honors

Manhattan Engineering Project, 1942-1947
Armed Forces Special Weapons Project, 1947-1959
Defense Atomic Support Agency, 1959-1971
Defense Nuclear Agency, 1971-1996
Defense Special Weapons Agency, 1996-1998
Joint Meritorious Unit Award, 1984
Joint Meritorious Unit Award, 1995
Joint Meritorious Unit Award, 1998

Defense Technology Administration, 1981-1998
Joint Meritorious Unit Award, 1991
Joint Meritorious Unit Award, 1998

On-Site Inspection Agency, 1988-1998
Joint Meritorious Unit Award, 1988
Joint Meritorious Unit Award, 1993
Joint Meritorious Unit Award, 1996
Joint Meritorious Unit Award, 1998

DTRA formed October 1, 1998
Joint Meritorious Unit Award, 2000

DTRA Seal

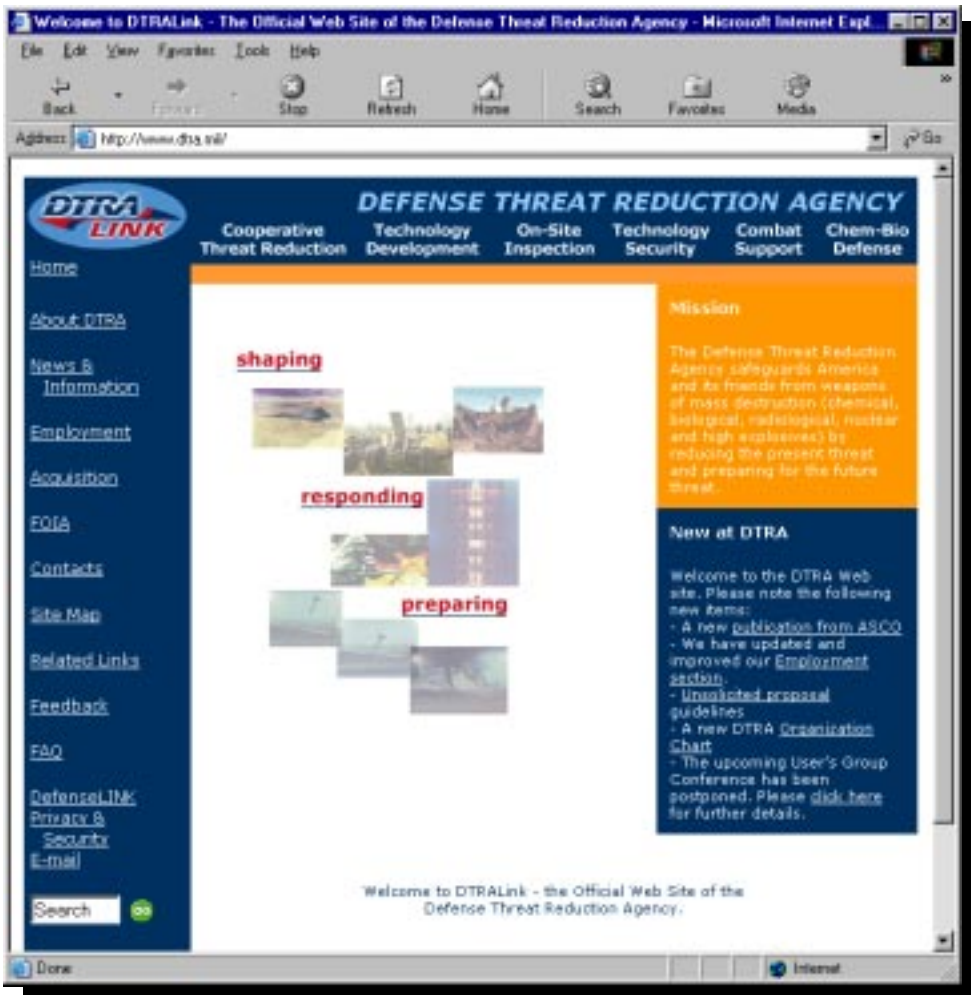
DESCRIPTION: On a sphere azure (oriental blue) gridlined in deep azure an eagle displayed overt and proper is grasping an olive branch in dexter talons and a bundle of thirteen arrows in sinister talons. Charged upon its breast a target bordured or with azure chief to gules surmounted by three bolts or. All within a designation band deep azure bordured or with inscription argent DEFENSE THREAT REDUCTION AGENCY chief to UNITED STATES OF AMERICA.

SIGNIFICANCE: The globe represents the worldwide importance and implications of the Defense Threat Reduction Agency's mission. The designation band reflects the Agency's service to the Department of Defense. The eagle is adapted from the Great Seal of the United States. The colors of the shield reflect the Agency's central task: to reduce the threat of weapons of mass destruction, while preparing for future and uncertain threats. The three arrows, adapted from the Seal of the Department of Defense highlight the military departments of the United States; they appear in parallel, symbolizing unity and direction.

Approved July 1999

DTRA Web Site

DTRALink is the official web site of the Defense Threat Reduction Agency. The site contains information about each of DTRA's operational directorates, updated news about the agency and conference registration data. The site's address is http://www.dtra.mil.



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